

**URBAN PLANNING AND ENVIRONMENTAL LAW**  
**QUARTERLY**  
*(Published since May 1992)*

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*Hong Kong's first municipal policy waste (MSW) charging scheme, initially proposed in 2005, finally was legislated to commence on 1 August 2024. However, in a regrettable U-turn, on 27 May 2024 the government indefinitely postponed implementation of the scheme. This edition considers issues related to that decision.*

*The Editors*

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**HONG KONG MARCHES BACKWARDS ON RESPONSIBLE WASTE DISPOSAL**

The government (and community at large generally) has long recognised that safe disposal of MSW is a serious environmental problem. As such, it has been on our collective radar for many years.

*Hong Kong has a monumental waste problem*

An article published by the BBC on 27 April 2017 encapsulates the bleak waste disposal picture, which is now, seven years later, even worse. The following extract gives the flavour of the article, which was largely based on an interview with a prominent environmental scientist, Professor Chan King Ming of Chinese University of Hong Kong.

*When I first meet Chan King Ming at the Chinese University of Hong Kong, it is difficult to imagine that the region is facing an environmental disaster. We are speaking on a crisp spring morning, in the leafy university campus in Hong Kong's New Territories. Between the trees, I can see the sea glistening under the gaze of the city's tower blocks and the steep climb of the mountains behind. There is not a single discarded plastic bottle or used newspaper in sight.*

*But appearances are deceptive. Hong Kong may be clean on the surface, but its public services are straining to keep a lid on its rubbish. Despite attempts to clean its act, the region produced 3.7 million tonnes of municipal waste in 2015 – the highest figure for five years. It has already cycled through 13 landfill sites, which are now being repurposed as parks, golf courses, and sportsgrounds, with just three sites remaining open. At this rate, it will only be a matter of a few years before those too begin to overflow. "If Hong Kong continues in this way, we will reach breaking point by 2020," says Chan – an estimate supported by Hong Kong's own Environmental Protection Department.*

Hong Kong traditionally exported a lot of its waste – particularly hazardous waste – to China, which reduced, to some extent, pressure on our own waste disposal facilities. However, several years ago, China banned importation of such waste, thereby creating a "Green Fence" to (partly) protect China's environment. Comments in an article in the South China Morning Post (15/06/2022) sum up succinctly how official inertia has greatly compounded the waste problem: "Hong Kong's waste problem is becoming an issue after decades of government foot-dragging. From collecting rubbish to processing it, to persuading people not to create it in the first place, the city lags far behind others in the region."

According to the most recent data published by the Environmental Protection Department (EPD), the current volume of solid waste dumped in landfills averages 15,725 tonnes per day. Of this, the amount of MSW – comprising domestic (or, residential) commercial and industrial waste – is 11,128 tonnes per day. Other kinds of waste are: construction waste (for which a separate charging scheme has been in place since December 2005); livestock; special categories; and clinical waste. Thus, MSW accounts for roughly 70% of total solid waste disposed of in our limited landfills.

In 2022, for example, 2,389 tonnes of plastics were sent to our three remaining landfills every day, which also reflects poorly on the efficiency of Hong Kong's recycling program (such as it is).

According to the EPD, in 2022 32% of MSW was “*recovered for recycling*” and 68% was disposed of at landfills. The composition of MSW going to landfill was food (30%); others (e.g. textile, wood, household, hazardous and miscellaneous, etc. waste) (25%); plastics (21%); paper (20%); glass (2%) and metals (2%).

In the *Climate Action Plan* announced by then Chief Executive, Carrie Lam, in October 2021, waste reduction was identified as a key component of the government's plans to achieve carbon neutrality by 2050.

Since 2005, the government has planned and debated imposing a community – wide charging system for the disposal of MSW-- the *MSW CHARGING SYSTEM (MSWCS)*-- which was to be the key plank in the government's policy for reducing our acute waste problem. Unsurprisingly, nearly 20 years later we still do not have a MSWCS.

### *The rise and demise of the MSWCS*

The MSWCS (also known as the *Waste Disposal Charging System*) was first proposed by the government in 2005. The government's inevitable (in environmental matters) lengthy time frame for the scheme's formulation, public consultation, trial and implementation was mentioned in early official press releases. Nevertheless, even by the EPD's historically slow approach to implementing environmentally beneficial measures, progress in making the MSWCS a reality was, and remains, astoundingly slow, if it is happening at all.

In short, nothing appeared to happen after 2005 until in 2008 it was announced that the MSWCS could not be implemented before 2010 because yet more time was needed to study its implementation. Ten years later, in 2018, a Bill to establish the MSWCS was introduced in Legco. Factional fighting among Legco members and the desire to protect vested interests led to this Bill lapsing in 2020.

Subsequently, on 26 August 2021 the Bill was passed. However, the government announced the MSWCS would not be operational for another 18 months (yet another delay!).

Trial implementation of the MSWCS commenced on 1 April 2024, involving a few selected housing estates and government offices. Full implementation of the MSWCS was scheduled for 1 August 2024. This initial trial proved to be far from encouraging only 20% of the public housing residents used the designated disposal bags (the result was much better in the offices), while cleaners complained that the scheme had increased their workload. This led the government to announce at the end of May that implementation of the MSWCS would be deferred until at least mid-2025.

Briefly, the MSWCS was based on the laudable objective of making individuals partly responsible for the cost of disposing their MSW, and also to encourage increased awareness of the need to reduce waste (which logically begins with reducing consumption). Residents have also been encouraged, and had some financial incentive offered by the government, to recycle recyclables and compost food. Waste facilities to receive such waste have been established in various parts of Hong Kong, and these have recently been significantly upgraded.

The MSWCS required residents to dispose of their MSW in bags supplied by the government for that purpose. The required bags, which could be bought (in packs of 10) at convenience stores, post office, parcel stations etc, cost for example: -

3L ——— HK\$0.33  
10L ——— HK\$1.10  
15L ——— HK\$1.70  
66L ——— HK\$73

Oversized items which could not fit into a bag had to be separately tagged with a label which cost \$11. It was estimated that the MSWCS would cost a resident approximately HK\$33-HK\$53 per month, based on an average daily waste output of appropriately 1.5kg. Failure to comply with the specified bag disposal system attracted a fine of HK\$1,500.

In announcing the delay in implementing the MSWCVS, the government said that in the meantime “*we will commence a series of measures, including enhancing recycling facilities, stepping up public education and promoting and studying how to improve the MSWCS*”.

Thus, having taken nearly twenty years to get this far with what is a fairly uncomplicated administrative programme, and given that the government could draw on the experience of other regional jurisdictions in implementing solid waste charging schemes some years ago – such as Seoul, Taipei and Tokyo, where they have been very successful in reducing waste for landfill – it is scarcely credible that the government needs yet many more months to work out how to implement the MSWCS.

In the SCMP on 27 June 2024, the Chief Executive was reported as saying that the initial trial of the MSWCS caused public “*confusion and concern about the affordability and implementation of the MSWCS*”.

### *The waste-strewn path ahead*

The government's *Waste Blueprint for Hong Kong* (8 February 2021) has the following broad ambition:

*The new blueprint advocates “Waste Reduction Resources Circulation Zero Landfill”. Under this vision, the Government will work with the industry and the community to move towards two main goals. The medium-term goal is to gratefully reduce the per capita MSW disposal rate by 40 to 45 per cent and raise the recovery rate to about 55 per cent by implementing MSW charging, while the long-term goal is to move away from the reliance on landfills for direct waste disposal by developing adequate waste-to-energy facilities. To achieve the above goals, the Government will promote six major areas of action, namely Waste Reduction, Waste Separation, Industry Support, Innovation and Cooperation,*

and Education and Publicity, leading the advancement of various policies and measures as well as building a circular economy and a sustainable green living environment.

Government spokespersons often refer to the “three pillars” supporting our waste disposal system:

- Landfills
- Incineration
- Recycling

Until recent times, we have had to rely on landfills almost entirely to cater for our waste disposal requirements, leaving aside decades of harmful disposal of waste at sea and the comparatively small quantities exported to China and other countries. Hong Kong has three landfill sites: West New Territories (**WENT**); North East New Territories (**NENT**); and South East New Territories (**SENT**). However, only WENT and NENT accept solid waste; SENT accepts only construction waste. Experts estimate that the capacities of both WENT and NENT will be exhausted by 2026.

Hong Kong’s first enumerator, the 1<sup>st</sup> phase of the Integrated Waste Management facilities on Shek Kwu Chau, is expected to be commissioned in 2025. It will have a capacity of 3000 tonnes per day. The 2<sup>nd</sup> phase (i.e. the second incinerator), to begin operating several years later, will handle 6000 tonnes per day. However, both incinerators will have approximately 10% of capacity taken up by non-combustibles and inert ash, which will have to be disposed of in landfills. The volume of Hong Kong’s MSW is approximately 12,000 tonnes per day.

For whatever reason, Hong Kong’s recycling record is not good. The rate at which we recycled recyclable MSW was approximately 52% in 2010. It is now approximately 29%. In 2022, approximately 22% of the 1.91 million tonnes of recyclable MSW was recycled in Hong Kong.

This is a general community ambivalence towards recycling, or outright ignorance of the environmental issues at play. The government needs to be far more pro-active in educating the public in respect of the aims and elements of any recycling programme it puts in place, as well as making it more convenient for people to recycle their waste.

### *Comment*

It is disappointing that official agencies rarely emphasise what should be the fourth waste management pillar: reuse, and its corollary, reduced consumption. While misguided economists are urging increased “domestic consumption” to improve the national economy, there is little chance, unfortunately that this fourth pillar will be embraced and promoted by our esteemed, waste management authorities. This is a great shame, as reducing use of materials in the first place, and/reusing goods/materials not only directly assists in solving the problem of MSW disposal, but has the flipside, added benefit of taking some pressure off the world’s limited natural resources.

The government should also implement other waste reduction measures, such as strictly regulating the kind and quantity of packaging of goods.

### *Conclusion*

Deferral of the MSWCS, despite its near 20 years gestation period, is difficult to comprehend. Seoul and Taipei implemented similar dedicated waste--bag schemes years ago, which has reduced their waste disposal volume by more than 30%. We can only hope that an effective, robust churning scheme is established well before our landfills are forced to close!

## TOWN PLANNING

### **Outline zoning plans adopted for San Tin Technopole**

On 19 July 2024, the Town Planning Board (the “TPB”) adopted the draft San Tin Technopole Outline Zoning Plan (“OZP”), the draft Mai Po and Fairview Park OZP and the draft Ngau Tam Mei OZP, and agreed to submit these draft OZPs to the Chief Executive in Council for approval. The three draft OZPs provide a statutory planning framework and planning control for the development of San Tin Technopole (the “Technopole”) (except the Loop) and the Sam Po Shue Wetland Conservation Park.

The TPB heard the oral submissions of about 160 representers and the responses from the government team in the four-day hearing in late-June and early-July, and conducted several hours of deliberation on 19 July before agreeing to the draft OZPs. The TPB also agreed to adopt some suggestions from the representers and incorporate them into the Planning and Design Brief (“PDB”), which will subsequently be submitted to the TPB for approval. The project proponents of the information and technology (“I&T”) development will be required to comply with the relevant requirements in the PDB.

TPB acknowledged that most representers support the I&T development at the Technopole while some have differing views on the need to fill the ponds for some I&T land. The Technopole is strategically located near the Loop and the Shenzhen I&T Zone, which should have a synergy effect. Owing to geographical constraints (surrounded by mountains) and the need for the Technopole to be of considerable scale to achieve a cluster effect, pond filling in a reasonable manner is necessary for the provision of I&T land.

Apart from stipulating the planning, engineering and urban design requirements for individual I&T sites, the PDB will also cover some specific aspects in response to the representers’ views, which include, inter alia, ensuring that the I&T land will be used for purposes in line with its planning intention, improving the connectivity of wetland habitats and enhancing the design of birds’ flight paths.

The PDB will be incorporated in the land leases or land grant documents for the I&T sites, requiring the project proponents to prepare Master Plans based on the PDB, which will be subject to approval by a committee under auspices of the Development Bureau.

[Town Planning Board Press Release, 20/07/2024]

### Draft Yau Ma Tei Outline Zoning Plan approved

On 26 July 2024, the Chief Executive in Council approved the draft Yau Ma Tei Outline Zoning Plan (“OZP”).

The approved OZP has incorporated amendments shown on the draft Yau Ma Tei OZP No. S/K2/25, which mainly involve:

1. removing the maximum plot ratio (“PR”) restriction for the “Commercial” (“C”) zone;
2. revising the maximum domestic PR restriction for the “Residential (Group A)” (“R(A)”) zone;
3. rezoning various sites along the character streets, including Temple Street (southern section) and Woosung Street, from “R(A)” to “Other Specified Uses” annotated “Mixed Use”; and
4. relaxing the building height restrictions for the “C” and “R(A)” zones.

[Town Planning Board Press Release, 26/07/2024]

### Draft Kwun Tong (South) Outline Zoning Plan approved

On 26 July 2024, the Chief Executive in Council approved the draft Kwun Tong (South) Outline Zoning Plan (“OZP”).

The approved OZP has incorporated amendments shown on the draft Kwun Tong (South) OZP No. S/K14S/25, which mainly involve:

1. rezoning a site to the west of Lai Yip Street from “Government, Institution or Community (1)” (“G/IC(1)”), “Open Space” (“O”) and areas shown as “Road” to “Commercial (1)” (“C(1)”) for commercial development;
2. rezoning a strip of land to the north of Hoi Bun Road from “G/IC(1)” and “C(1)” to an area shown as “Road”;
3. rezoning a site to the south of How Ming Street from “Other Specified Uses” annotated “Business 1” to “Other Specified Uses” annotated “Business” to reflect the completed development;
4. incorporating the area covered by the approved Urban Renewal Authority Kwun Tong Town Centre – Yuet Wa Street Site Development Scheme Plan No. S/K14S/URA2/2 into the OZP and zoning the area mainly as “Residential (Group B) 1” and a strip of land shown as “Road”; and
5. rezoning a strip of land along Hang On Street from “O” to “G/IC” to reflect the completed development.

[Town Planning Board Press Release, 26/07/2024]

### Draft Tuen Mun Outline Zoning Plan approved

On 26 July 2024, the Chief Executive in Council approved the draft Tuen Mun Outline Zoning Plan (“OZP”).

The approved OZP has incorporated amendments shown on the draft Tuen Mun OZP No. S/TM/38, which mainly involve:

1. rezoning a site at the upper section of Hong Po Road from “Green Belt” (“GB”) and an area shown as “Road” to “Residential (Group A) 28” (“R(A)28”);
2. rezoning a site at the junction of Hong Po Road, Tsing Lun Road and Ng Lau Road from “Residential (Group E) 1” (“R(E)1”) and an area shown as “Road” to “R(A)28”;
3. rezoning a site to the west of Ng Lau Road from “R(E)1” to “Government, Institution or Community” (“G/IC”);
4. rezoning a site in Tuen Mun Area 9 from “Comprehensive Development Area (1)” (“CDA(1)”), “CDA(2)” and an area shown as “Road” to “Commercial (2)”;
5. rezoning a site adjacent to Ho Tin Light Rail Station from “CDA(1)” to “Open Space” (“O”); and
6. rezoning two sites to the west and further west of Hing Fu Street from “GB” to “G/IC(3)” and “G/IC(4)” respectively.

[Town Planning Board Press Release, 26/07/2024]

## DIGEST OF LEGISLATION

### Enhanced Producer Responsibility Scheme for Waste Electrical and Electronic Equipment

On 1<sup>st</sup> July 2024, the enhanced Producer Responsibility Scheme for Waste Electrical and Electronic Equipment (“Scheme”) was implemented as a result of extensive amendments to the *Product Eco-responsibility Ordinance* (Cap. 603). Expanded coverage of the Scheme was first formally proposed in the *Product Eco-responsibility (Amendment) Bill 2023*.

Under the old Scheme, sellers of regulated electrical equipment (“REE”) were required to provide consumers a free service to dispose (in the permitted manner) of their old product which the new product replaces. Since its operation from 1<sup>st</sup> August 2018, the old Scheme covered a range of REE, such as: air conditioners; refrigerators; washing machines; televisions; computers, printers; scanners; and monitors.

The enhanced Scheme expands the range of REE coverage for free removal service to include:

- (i) refrigerators with rated storage volume up to 900 litres (previously 500 litres),
- (ii) washing machines with rated washing capacity up to 15 kg (previously 10 kg),
- (iii) stand-alone tumble dryers,
- (iv) dehumidifiers.

The government hopes that the revised Scheme will help the public make good use of the door-to-door free removal service and dispose of waste electrical and electronic equipment in an environmentally responsible way. By facilitating downstream recyclers' collection of electrical waste, more waste will be properly treated, recycled and turned into usable resources.

Suppliers and sellers are no longer required to disseminate recycling labels to consumers during sales and distribution of REE. However, sellers still need to provide consumers with a receipt containing certain phrases to inform them about the recycling levy paid by the registered suppliers. The government hopes this will create a "visible fee" effect for consumers.

Suppliers (including manufacturers and importers) distributing these four new types of REE must first register with the Environmental Protection Department ("EPD") as a Registered Supplier before distributing them in Hong Kong. They are also responsible for paying the EPD the prescribed recycling levy. As for sellers, they must first apply to the EPD for endorsement of their removal service plan before selling the REE.

From January 2024, the EPD began informing relevant stakeholders, including electrical equipment suppliers and trade associations, about the enhanced Scheme. The EPD visited approximately 1600 suppliers and sellers and distributed publicity materials to explain the details of the enhanced Scheme.

To ensure a smooth transition to the enhanced Scheme, the EPD began accepting applications from 1 January 2024 for supplier registration and removal service plan endorsement. Information regarding the application processes and requirements were posted on the Scheme website (<https://weee.gov.hk/en/>) in January 2024 to encourage early submission.

[Press Release, Government of Hong Kong, 25/06/2024]

## WEST KOWLOON CULTURAL DISTRICT

### The 119<sup>th</sup> Board Meeting of the West Kowloon Cultural District Authority

#### M+ celebrates design and architectural masters

M+ launched the exhibition "*Henry Steiner: The Art of Graphic Communication*" on 15 June. Henry Steiner, known for creating iconic logos for institutions, including HSBC, Standard Chartered Bank, The Hong Kong Jockey Club and Dairy Farm, has observed Hong Kong's evolution over the past decades. The exhibition honours the remarkable accomplishments of this Hong Kong pioneering graphic designer.

Following this, M+ staged the special exhibition "*I. M. Pei: Life Is Architecture*," beginning 29 June. This exhibition, being the first extensive retrospective of I. M. Pei's architectural work, displays more than 300 items covering decades of his career. The exhibit features original drawings, architectural models, photographs and films, offering insights into Pei's design philosophy, creative process and his fusion of Eastern and Western cultural elements in modern architecture. The exhibition is sponsored by Bank of China (Hong Kong). I. M. Pei is also the architect who designed the impressive Bank of China Tower in Hong Kong.

Throughout the exhibition, M+ plans to organise various public events, including a complimentary lecture by Pei's son, Li Chung (Sandi) Pei, and Pei's longtime associates, Calvin Tsao and Aslihan Demirtaş, along with film screenings highlighting Pei's architectural works.

The two M+ exhibitions showcase influential figures: a globally renowned architect who has influenced international urban landscapes, and a Hong Kong-based design expert who has crafted iconic brand identities. Both individuals have significantly impacted social culture. M+ intends these exhibitions to honour these masters and encourage visitors to contemplate the connections between architecture, design, and daily life.

#### M+ at Night

The West Kowloon Cultural District Authority ("WKCD") is placing significant emphasis on promoting nighttime arts activities for the 2024/25 period. In addition to reorganising the "*WestK Nightscapes*" this autumn, the WKCD will also launch a variety of evening programs at both M+ and the Hong Kong Palace Museum ("HKPM").

In April, M+ introduced "*M+ at Night*", a new monthly event transforming the museum into a lively arts and cultural destination on the first Friday evening of each month. This programme showcases Hong Kong's unique night culture. The April event, "*Black and White Discoteca Affair*" provided a distinct visual spectacle by blending black-and-white photography with disco elements. May's theme, "*Hong Kong Retro-Grooving*", took attendees on a nostalgic journey through the city's dynamic fashion and cultural shifts over the decades. In June, the theme "*Game Together*" allowed participants to indulge in the nostalgia of classic arcade games. These events have attracted a total of over 4,000 participants. After a summer vacation, "*M+ at Night*" is expected to return in September with more captivating experiences.

Meanwhile, HKPM is launching "*Adventure Night@HKPM*" during the summer holidays. This program offers families the unique opportunity to stay overnight in the museum to participate in a series of educational and interactive activities. These nighttime initiatives are designed to provide innovative and engaging ways for the community to connect with the arts.

#### Construction progress update

Pre-drilling work for H-piles and the temporary pipe pile retaining wall of the Southern Landing Facilities project were completed in March and April 2024. Excavation work for seawall modification is in progress, with completion expected by October 2024. The entire Southern Landing Facilities project is on track for completion in the latter half of 2025.

In Zones 2B and 2C Integrated Basement, the main foundation works are now complete. The Buildings Department finished its pile drilling inspection and acceptance in May 2024, and the project team is now awaiting final approval. It is anticipated that the foundation works contract will be finalised by the end of the second quarter of 2024, setting the stage for further construction activities.

The structural works for the theatre seating of the Lyric Theatre Complex have now been completed. The installation of glass curtain walls and the power supply system has been initiated, demonstrating the project's advancement towards its goal of becoming a premier performing arts venue.

Lastly, the Artist Square Towers project is in the design refinement phase, with construction scheduled to begin after the second quarter of 2024.

[West Kowloon Cultural District Authority Press Release, 20/06/2024]

## HONG KONG BRIEFING

### Postponement of waste charging implementation

The government has announced a postponement of the municipal solid waste charging scheme. Deputy Chief Secretary for Administration Warner Wing-hing Cheuk explained that the social impact of implementing such a charge is unprecedented. Issues identified during a trial program showed that postponing implementation is a practical and correct decision.

Cheuk stated that the waste charge was originally set to be implemented at the end of last year. However, due to staffing concerns raised by the cleaning industry, the implementation was delayed. As the date of the delayed implementation (1 April 2024) approached, public concerns increased.

To address these concerns, the government launched an eight-week trial at 14 locations from April 1. Cheuk noted that the trial revealed previously issues not previously envisaged or discussed, that, while not problematic on paper, became apparently so in practice.

Furthermore, surveys conducted by the government since January indicate that 70-80% of citizens oppose the implementation of waste charges on August 1. Cheuk describes the government's decision to postpone as "practical, correct, and perhaps the only viable option".

Cheuk highlighted that most citizens are hesitant about the waste charge, and the recycling culture is not yet well-established. Despite improvements, the recycling network and facilities are still limited. For these reasons, he supported the Environment and Ecology Bureau's recommendation to delay implementation, which was accepted by the Chief Executive.

Environment and Ecology Secretary Tse Chin-wan emphasised the challenges of changing the habits of over 7 million citizens and addressing multiple issues. The government's commitment to reducing solid waste remains unchanged, and efforts to promote waste reduction and recycling will continue.

Starting June 1, the government provided 20 designated bags per month to all public housing residents for six months to help them adapt to waste reduction. Other initiatives include expanding food waste recycling, extending the operating hours of "GREEN@COMMUNITY" recycling facilities, and increasing the number of collection points.

[政府新聞網 ([news.gov.hk](http://news.gov.hk)), government of Hong Kong, 04/07/2024]

### EPD Food Waste Collection Scheme expanded to all PRH estates

Marked by the food waste recycling promotion event held at Ping Shek Estate in Kwun Tong on 4 July 2024, the Environmental Protection Department ("EPD") has expanded its food waste collection scheme to all public rental housing ("PRH") estates across the territory. This expansion has been effected two months ahead of the original target.

The scheme, launched in late October 2022 in collaboration with the Housing Department and the Hong Kong Housing Society, aimed to install food waste smart recycling bins ("FWSRBs") in all 213 PRH estates by the end of August 2024. By June 2024, the EPD had installed 740 FWSRBs, which covered all PRH estates, before the initial timeline. Secretary for Environment and Ecology, Mr. Tse Chin-wan, emphasised the importance of this achievement and noted that domestic food waste accounts for 30% of municipal solid waste in Hong Kong. "*The expansion of the Food Waste Collection Scheme to all PRH estates across the territory ahead of schedule fully demonstrated the government's determination and achievements in promoting waste reduction and recycling.*" Mr. Tse said.

Collected food waste will be converted into electricity and compost at treatment facilities. The EPD plans to continue installing FWSRBs in new PRH estates and will increase their number in existing ones with a priority of PRH estates with higher food waste volumes. The goal is to have at least one FWSRB per PRH block within two years.

The government is also supporting the installation of food waste smart recycling bins in private residential buildings and rural villages through the Recycling Fund and the Environment and Conservation Fund. The EPD, in collaboration with the Environmental Campaign Committee, launched a pilot scheme offering free FWSRBs to private housing estates with over 1,000 households last year. This scheme will expand to include estates with fewer households; details are expected in the third quarter this year.

To assist residents in single-block residential buildings or "three-nil buildings," the EPD plans to enhance food waste collection schemes by establishing 100 food waste recycling spots with night-time collection services and adding recycling points at around 100 Refuse Collection Points. FWSRBs have been installed in four GREEN@COMMUNITY facilities and at Lockhart Road Market, with plans to expand to GREEN@TUEN MUN by mid-July.

The EPD concluded that the awareness of waste reduction and recycling in the community has increased in general. It is expected by the EPD that the quantity of food waste recycled will progressively increase, and the EPD will continue to encourage more residents to participate in food waste recycling through various measures including publicity and education, as well as the provision of GREEN\$ rewards.

[Press Release, government of Hong Kong, 04/07/2024]

## ADVISORY COUNCIL ON THE ENVIRONMENT (ACE)

On 22 April 2024, the ACE held its 263<sup>rd</sup> meeting. The main topic of discussion was a review of the recommendations made by the Environmental Impact Assessment Subcommittee (EIASC) on the Environmental Impact Assessment (EIA) report concerning San Tin / Lok Ma Chau Development Node.

### *Presentation and Q&A session*

Gavin Wong (Chief Engineer of North 4 district) made introductory comments and other members of the Project Proponent Team highlighted the background and benefits of the project, results of the EIA study and feedback to comments received from the ACE and other stakeholders.

### *Project implementation*

Three members expressed the importance of balancing between development and environmental conservation, while a member opined that the government should strive to create positive environmental impacts beyond meeting the minimum requirements set by the *EIA Ordinance*.

A member was concerned with the timing for developing the innovation and technology (I&T) area and its impact on the neighbouring wetlands. Mr. Wong replied that the project would begin with the site formation works in the northern part of the site, and the construction works at the existing brownfield sites in the southern area would begin at a later stage. Tony Cheung said that a working group would be formed between CEDD and AFCD to oversee construction work related to the San Tin Technopole and Sam Po Shue Wetland Conservation Park. He assured members that the construction activities and associated noise levels would be controlled during the breeding season of the egrets.

A member noted the potential expansion of Qianhai would allow the government to consider reducing the area of fishponds to be filled. Pecvin Yong replied that reasonable use of fishponds was necessary to extend the development area northward and westward to improve land planning layout and create ample space for the I&T area.

Concern about the government's compliance with ACE's conditions and recommendations was raised by a member. Mr. Cheung replied that CEDD would follow the Habitat Creation and Management Plan (HCMP) and bring forward the conservation and monitoring measures recommended in the HCMP.

### *Project design*

Several members raised suggestions regarding the design of the project. One member opined that the entire development area should maximise greening, while three other members noted that the project team should adopt blue-green infrastructure design. One member of the three above suggested that the plan should include more cycling paths and more trees along the pedestrian roads. Another member opined that the cultural heritage and historical features of San Tin should be included in the project design. In reply, Mr. Cheung said that they were communicating with the local villagers to create spaces which reflect the local culture of San Tin.

### *Impact on birds*

Members were concerned with the negative impact of development on birds inhabiting the area. Two members suggested that interim wetland enhancement measures and other preparatory works should be carried out before the pond filling works. Another two members said that more bird species should be included in the scrutiny of the HCMP to protect these species. Mr. Cheung assured that CEDD would add more bird species in the monitoring programme of the HCMP.

A member opined that the reduction of wetland areas might harm the foraging and breeding of migratory birds in Hong Kong. Mr. Cheung said that the development of Sam Po Shue Wetland Conservation Park would remedy the loss of wetland ecological function arising from the San Tin development. Further, CEDD proposes to implement interim wetland enhancement measures to help attract migratory birds, e.g. restoration of abandoned ponds and trash fish stocking.

### *Wildlife Corridors*

Two stakeholders, Kadoorie Farm and Botanic Garden, suggested adoption of wildlife corridors for otters in order to preserve them. Mr. Cheung replied that while currently the flap valve and inflatable dam has blocked the proposed corridors due to the need to control water inflow and quality in the area, CEDD would strive to implement other measures to help otters move across different wildlife regions. Another two members further suggested that CEDD should communicate with relevant government departments to improve the design of wildlife corridors.

### *Landscape impact and flooding risk*

A member enquired about the survival and density of trees which will be planted to offset partly the significant loss of vegetation resulting from the project. Mr. Cheung assured members that CEDD would plant compensated trees in compliance with relevant guidelines and consult tree experts in the process.

Regarding the flooding risk, a member proposed including a recommendation for climate-resilient design in the EIASC recommendation report. Mr. Cheung confirmed that CEDD would comply with the most recent Stormwater Drainage Manual issued by the Drainage Services Department during the design of the drainage facilities. He added that the total capacity of different flood retention facilities will be 200,000 cubic metres and the drainage water would be discharged to the sea instead of flowing into the wetlands.

### **Carbon reduction**

Various members were supportive of deploying the latest technologies to achieve various carbon reduction and sustainable development objectives. One member proposed adopting low-carbon materials and construction technology, while another member suggested deploying the latest “Photovoltaic, Energy Storage, Direct Current and Flexibility” technology and establishing a baseline to help evaluate the carbon performance of the project. Mr. Cheung said that CEDD would consider deploying the latest carbon-reduction technology in the project.

## **CLIMATE CHANGE**

### **Heat and floods spur China’s climate-change awakening**

After last year’s record-breaking heat waves, June brought drought, floods and typhoons – sometimes quickly coming one after another. Extreme heat delayed crop planting in the eastern province of Shandong weeks before it was hit with floods.

After decades of campaigning by climate activists, Beijing has made adapting to bouts of extreme weather a greater policy priority. Last week, weather officials issued an unusually direct warning about the country’s vulnerability to intensifying heat and rainfall, worsened by climate change.

A month earlier, the Ministry of Ecology and Environment had released its first progress report on adaptation to the threat of climate change, which highlighted the need for better early-warning systems and improved coordination amongst departments in charge of construction, water management, transportation and public health.

*“When these departments are siloed off, it impedes a systematic response to climate,”* said Liu Junyan, a Beijing-based campaigner for the environmental advocacy group Greenpeace. *“We can’t miss the big picture because we’re all tucked away in different corners putting out our own crises.”*

This coordination, Liu said, will be key to saving lives during this year’s floods, as will improving advanced notice for residents in the remote and mountainous countryside, where mitigation work remains weak.

China’s climate-change adaptation problem is exacerbated by vast differences in wealth and geography. The country’s 1.4 billion people mostly live in dense concrete sprawls prone to flash flooding during downpours. Factories and financial centres are concentrated along the low-lying east coast.

While local governments recognise the importance of climate change, *“differences in economic development between regions mean there are gaps in capacity for disaster prevention, resistance and response,”* said Tang Xu, a professor of atmospheric sciences at Fudan University in Shanghai.

Tang, who previously served as director of the Shanghai Meteorological Bureau, reels off the disasters that regions faced in recent years – drought in the northwest, landslides and mudslides in the southwest, typhoons and storm surges on the east coast – to underscore why disaster prevention is a formidable task.

The result, according to Tang, is that some places are moving fast to find and address risks whilst others take their time – but at least everyone is now aware of the issues. *“You can’t use the same standard to say who’s doing a good job and who’s doing a bad job,”* he said.

Within China, historically a gradually warming atmosphere took a back seat to concerns about clearing hazardous smog that blanketed major cities. Public discussion and scientific research on the topic were limited compared with that in Europe or North America. However, this situation has changed dramatically in recent years, in part because Chinese leader Xi Jinping wants to be seen as a global leader on climate issues. Green technologies are also now a critical driver of the Chinese economy.

China brought more solar panels online last year than the rest of the world combined, and the country is projected by the International Energy Agency to account for 60 percent of global renewable energy installations by 2028. Experts on Chinese energy systems widely believe that the country could reach peak carbon dioxide emissions ahead of the official goal of “before 2030” – if Beijing keeps a check on local governments that continue to approve new coal-fired power plants.

[*The Washington Post*, 09/07/2024]

### **Kew Gardens look to planting resilient trees**

Behind the lush greenery, roses in bloom and birdsong at London’s famous Kew Gardens lies the darker reality of climate change, which threatens to kill thousands of its trees in the coming decades.

Some trees at the botanical gardens, which were first opened in 1759 and today are a UNESCO World Heritage Site, are already in a state of irreversible decline. Experts at Kew have used climate modelling to show that over half of the gardens’ 11,000 trees may be at risk of dying by 2090, as a warming climate makes the soil drier and reduces the amount of water trees can access.

Kew's problem is worsened by the warmth radiating from London's dense metropolis towards the gardens, known as the urban heat island effect, which makes night-time temperature much warmer than in rural regions.

Kew's 8.5 million plant and fungal specimens have long been drawn not just from Britain but from around the world – from the cherry blossoms of Japan to the water lilies of the Amazon – and solutions to withstanding climate change may also lie thousands of miles away.

Plant material from the Hyrcanian forests of Iran and Azerbaijan, the great steppes of Eurasia, the southwestern United States or parts of continental Europe would all be resilient enough to withstand climate change in Britain, experts said in a report published last week.

This sort of replacement could also become a model for urban planners to mitigate the effects of climate change, the report said.

Kew is warmer by about 3C than it was in the 1980s, putting much-loved British natives such as the English oak (*Quercus robur*) at risk, said Kevin Martin, head of tree collections at the gardens and a former tree surgeon.

A drought in 2022, when temperatures around the British capital reached a record 40C, killed 400 of Kew's trees, spurring the need to think about introducing more resilient species, said Martin, who will travel to Georgia in September to collect seeds to plant at Kew.

*"It's going to be vitally important, not only for our generation, but for the next generation,"* Martin said, standing beside a 124-year-old weeping beech (*Fagus sylvatica* 'Pendula') in decline.

[Reuters, 29/07/2024]

### Four hundred-year record heat threat to Great Barrier Reef

A study of samples taken from inside the bodies of centuries-old coral has revealed the threat climate change now poses to Australia's Great Barrier Reef.

Researchers in Australia say temperatures in and around the vast coral reef over the past decade are the highest recorded in 400 years. Extreme heat has already caused five mass bleaching events in the past nine years alone.

Writing in the journal *Nature*, the scientists behind the study say increased temperatures, driven by climate change, now pose an "existential threat" to this natural wonder of the world.

*"The science tells us that the Great Barrier Reef is in danger – and we should be guided by the science,"* Professor Helen McGregor, from the University of Wollongong, told BBC News.

The new evidence comes from within the coral itself. Over many years, marine scientists have collected cores, samples drilled out of the skeletons of coral, which provide chemical clues about how the environment around the reef has changed as the coral developed. Coral – which are animals, not plants – can live for centuries, laying down chemical indicators about their natural environment.

Researchers in Australia re-examined the data from thousands of these cores and cross-referenced them with historical sea temperature records from the UK's Hadley Centre. The research showed temperatures around the Great Barrier Reef in the previous decade were the warmest of the past 400 years.

*"The recent events in the Great Barrier Reef are extraordinary,"* said lead researcher Dr. Benjamin Henley, who carried out the study while working at Wollongong University. *"Unfortunately, this is terrible news for the reef."*

*"There is still a glimmer of hope though,"* Dr. Henley added. *"If we can come together and restrict global warming, then there's a glimmer of hope for this reef, and others around the world, to survive in their current state."*

Corals have adapted to survive and grow within a specific temperature range, forming a skeleton that provides a living habitat for other marine life. Corals exist in a symbiotic partnership with a special type of marine plant, a species of algae, which lives inside the coral, providing it with food and giving it its bright colour.

Bleaching occurs when sea temperatures rise too high and corals expel their algae, subsequently turning white. *"While bleach coral can recover, if the heat does not relent, it doesn't have the chance to,"* Dr. Henley explained.

The Great Barrier Reef is currently a UNESCO World Heritage site. Scientists hope that this research could persuade the UN organisation to change its mind and give the reef official "endangered" status. Professor McGregor said this *"would send a huge signal to the world about how grave the problem is"*.

*"We know what we need to do,"* Professor McGregor added. *"We have international agreements in place [to limit global temperature rise]."*

*"I think we just need to put the politics aside and get on with it."*

[BBC News, 07/08/2024]

### Climate change crashed the Paris Olympics

Heavy downpours marred the opening ceremony and degraded water quality in the River Seine, which the city spent \$1.53 billion on in an effort to clean it in time for the Games.

The rain-soaked start of the Games gave way to sun and extreme heat, with temperatures in the capital peaking at 36C. In the South of France, where football and sailing are taking place, the mercury reached a staggering 41C.

The heatwave, which affected many other countries bordering the Mediterranean in July, was made between 2.5C and 3.3C hotter by the burning of fossil fuels. In fact, according to an analysis conducted by World Weather Attribution (WWA), such extreme temperatures would have been “virtually impossible” without human influence on the climate system.

“Yesterday, climate change crashed the Olympics,” said Friederike Otto, a climate scientist from Imperial College London and co-founder of the WWA group. Without an atmosphere overloaded with emissions, Otto said, Paris would have been “much safer for sport.”

As Otto rightly said, it is increasingly harder to keep the Games safe. Requiring athletes to compete in these extreme conditions is risky, and WWA’s shocking conclusion should serve as a wake-up call for the organisers of future Olympics.

Stress caused by heat prevents our bodies from cooling down properly. Sweat helps our bodies cool off and maintain an ideal temperature, which ranges anywhere between 36.1C and 37.2C. But heat and humidity change the way sweat evaporates from the body. Not being able to cool down properly, especially as night-time temperatures remain high, puts people’s health at risk. It can lead to increased cardiovascular and respiratory complications, dehydration, heatstroke, higher blood pressure, and sleep deprivation, and in more severe cases, it can be deadly.

Many will remember Spanish tennis player Paula Badosa being escorted from the tennis court in a wheelchair after suffering a heatstroke at the Tokyo Olympics; or race walker Masatora Kawano throwing up over himself, then dropping to the floor during the men’s 50-kilometre race walk, which took place in unforgiving 32C heat. They were just two of approximately 50 athletes experiencing heatstroke during the 2021 Games, the hottest in history.

Fortunately, the organisers were prepared and had several heat countermeasures in place to protect athletes, which prevented any serious consequences. The Paris Olympic Committee followed suit, though not without criticism.

Dozens of athletes condemned the absence of air conditioning in the Olympic village, a choice that was part of the committee’s commitment to have carbon neutral Games. Because of other cooling measures in place, organisers have said, the athletes would not need it. But not everyone agrees.

So, the question arises: For how much longer will we be able to have the Games as the world continues to heat up?

According to the International Olympic Committee (IOC), only 10 countries will be able to host snow sports by 2040 due to the impact of climate change. And what happened during the 2022 Beijing Winter Olympics, when extreme heat melted the snowpack, forcing the organisers to resort to artificial snow, is just another reminder that we are running out of time.

PyeongChang in South Korea, which hosted the Winter Games in 2018, manufactured nearly 90% of the snow in advance at a total cost of US\$6 million.

“While global temperatures continue to rise, climate change should increasingly be viewed as an existential threat to sport,” said Sebastian Coe, president of World Athletics and two-time Olympic gold medalist.

In a warming world, many argue that Paris could and should have compromised on its carbon neutrality goal to safeguard athletes’ health. Others, like the British Association for Sustainable Sport and Front Runners in Australia, say the schedule of the sports competition should be changed so that it can take place over cooler months, or at cooler times of the day.

“There has never been a greater need for heightened awareness, discussion and research into what is happening on the planet and why. Sport is just one part of that, but we cannot be spectators, we must all play a role,” said Coe. “We are in a race against time. And this is one race that we simply cannot afford to lose.”

[*Earth.Org*, 10/08/2024]

### **Deadly landslides in India made worse by climate change**

A sudden burst of rainfall on 30 July 2024 caused a cascade of landslides that buried hundreds of people in the mountainous Kerala region of southern India.

That downpour was 10 percent heavier because of human-caused climate change, according to a study by World Weather Attribution, a group of scientists who quantify how climate change can influence extreme weather. Nearly six inches, or 150 millimetres, of rain fell on soils already highly saturated from two months of monsoon and marked the third highest single-day rain event on record for India.

“The devastation in northern Kerala is concerning not only because of the difficult humanitarian situation faced by thousands today, but also because this disaster occurred in a continually warming world,” said Maja Vahlberg, a climate risk consultant at the Red Cross/Red Crescent Climate Centre. “The increase in climate-change-driven rainfall found in this study is likely to increase the number of landslides that could be triggered in the future.”

Already, 2024 is an outlier, Dave Petley, the vice-chancellor of the University of Hull, posted to The Landslide Blog on 13 August 2024. He wrote that he could “only speculate on the likely underlying reasons for this very high incidence of fatal landslides,” but “the most likely cause continues to be the exceptionally high global surface temperatures, and the resultant increase in high intensity rainfall events.”

Global warming, caused primarily by the burning of fossil fuels, causes the atmosphere to retain more moisture, which contributes to the severity and intensity of rain. Heavier rain over a longer period of time can waterlog the soil, making a hillside heavier and more susceptible to slippage.

In Kerala, as elsewhere, potential adaptations could include reinforcing high-risk slopes, installing retaining structures, planting vegetation and protecting forest reserves. Other steps include encouraging people and businesses to avoid living in or developing commercial zones around high risk areas.

The study also found that prevention of disasters in hillside communities also required more rigorous risk assessments and improved early warning systems. Although the Indian Meteorological Department issued an early warning in the days leading up to the landslide, the alert was state-specific, making it difficult to determine which localities would be affected and should evacuate.

How land is used and what it is covered with is another factor in landslide risk. Ms. Vahlberg said the link between landslides and changes in the way land is being used – for instance, when woodland is cleared, or buildings are constructed on a steep slope – required further study. Still, she said, in this case, quarrying for building materials, plus the 62 percent reduction in forest cover in the region, could have contributed to the slippage.

Bill Haneberg, a geological consultant and former Kentucky State Geologist, said geologists have the technology and expertise to illustrate landslide hazard zones and save lives, but identifying these areas can be unpopular, because they can affect communities and property values.

*“It’s a matter of politics that there are always people who think it’ll be in their best interest not to delineate or identify these hazardous areas,”* he said, *“It’s not like we don’t understand the problem or have the technology. We just don’t do it.”*

[*The New York Times*, 13/08/2024]

## REGIONAL & INTERNATIONAL

### Africa

#### *High costs of combating extreme climates*

The World Meteorological Organisation (WMO) reported that African countries are forced to spend up to 9% of their national budgets to battle the effects of extreme climates. While the continent is the least responsible for the historical greenhouse gas emissions, the African nations are suffering the most from global warming.

African countries are still developing their economies, but they lose approximately 5% of their production to extreme and disastrous weather, such as heatwaves, heavy precipitation and consequential floods, cyclones and droughts. In order to handle the consequences of extreme weather, the WMO estimated that these nations have to spend \$300-500 billion in the next decade to develop national meteorological and hydrological services and early warning systems.

It is expected that the African countries will seek to secure a larger portion of global climate financial resources in the upcoming Conference of the Parties of the United Nations. Until this August, Africa has only been able to obtain less than 1% of the despite its efforts to attract more funds in recent years.

[*Reuters*, 02/09/2024]

### Australia

#### *Generating electricity from cremations and waste*

Cremating bodies is an energy-intensive process; the sheer amount of energy required to cremate an individual body can generate more than 250kW in wasted heat. But what if we could harness that excess heat, and use it to create a renewable energy that could power our homes and businesses?

An Australian start-up company has completed a series of successful trials of what the team behind it says is a commercially viable electricity engine that runs on waste heat – including a successful “proof of concept” trial at a Victorian crematorium.

*“Cremations are an exothermic process in that they actually give off more energy than they soak up,”* said Capricorn Power chief executive Geoff Andrews. Crematoriums can use 600kW in energy to power a cremation, with 250kW of that power considered “excess” and disappearing up flues as waste heat.

Following the crematorium trial, Capricorn Power successfully tested an updated prototype engine, the Barton Engine, over 400 days on a purpose-built natural gas burner, to establish its commercial viability.

In time, Andrew said, the engines could be used to heat biological waste, such as sewage “sludge”, nutshells, and biowaste from piggeries and abattoirs, to more than 400 degrees and transform it into low-emissions energy. *“There’s plenty of waste material around; enough that we can actually be stringent or fussy about not taking a resource that could have a high-value use,”* he said.

The Barton Engine fits inside a shipping container and, its proponents say, could be used by businesses to take biowaste and transform it into portable energy supplies that power the business producing the waste.

The independent Climate Change Authority has increased pressure on the federal government and every sector of the economy to reduce emissions.

The Authority on Thursday outlined its recommendations for how the six highest emissions-producing parts of the economy should reach net zero by 2050. It found managing Australia's waste – particularly organic material in landfill, which produces methane that accounts for about 75 per cent of emissions from the waste sector – would be crucial in limiting the dangerous release of greenhouse gases. Emissions from sewage systems, biological (including medical) waste, and thermal waste treatments from incinerators comprise another 20 per cent of emissions from waste, the report said.

*"A mix of technologies for the progressing of organic waste will be required, and these are likely to consist of composting, anaerobic digestion and combustion of waste to generate energy,"* the report found.

The Victorian government has thrown its support behind waste-to-energy projects, and announced in July it would contribute \$8 million to 24 projects, which it says could boost the state's renewable energy capacity by 6.82 megawatts, which is enough to power 3410 homes with renewable energy.

Yarra Valley Water in April announced a new \$48 million Lilydale facility would start accepting commercial food waste from as early as 2025, using "digesters" rather than a gasifier or incinerator process, to break down the food to create biogas.

[*The Age*, 09/09/2024]

## **Dominican Republic**

### *Criminal charges for polluting a river*

ELAW partners in the Dominican Republic recently won a court verdict on criminal charges brought, against the owner of a pig farm that had been polluting the Rio Jamao al Norte in Espaillat province for years. The court sentenced Luis Manuel Brache, owner of LB, SRL Pig Farm, to a one-year suspended sentence, suspended his environmental license to operate until he corrects the violations of the law, ordered him to give talks to pig farmers as a way of compensating for the one-year suspended sentence with community service, imposed a fine of 15 million pesos (US\$ 256,000), and ordered the environmental damage to be remedied.

Euren Cuevas Medina, from the Institute of Lawyers for the Protection of the Environment (INSAPROMA), says, *"We are satisfied with the verdict because it creates an important precedent for the cleanup of rivers for human health, water quality, and environmental health. The Jamáo Al Norte River is the most important in the Espallat province. It provides drinking water to the province as well as the supply to water crops and cattle. The province is an ecotourism destination, thanks to the beauty of the turquoise water and natural pools visitors and locals enjoy"*.

To achieve this verdict, more than 20 institutions and individuals, along with INSAPROMA, united to demand justice.

Euren approached ELAW's Science Team for support in interpreting the environmental report concerning the case and determining what diseases could be caused by the waste listed among the effluents from the pig farm. The most concerning community health findings were the results of the analyses that tested positive for E. Coli. These bacteria contain a potent toxin that damages the lining of the small intestine. The Court found that many people have been injured by the river pollution caused by the pig farm.

[*Elaw Press Release*, 10/09/2024]

## **Kenya**

### *Coastal village disappearing as sea level rises*

Kipini is a coastal village in Kenya, frequented by many local and overseas tourists alike for its pristine beach along the long shoreline and its laid-back lifestyle. However, this view has been changing in the recent decade. Due to the rising sea level, a luxury hotel lost all of its nine coastal cottages from 2014 to 2019.

The cause of all the destruction is the Tana River, which eventually flows into the Indian Ocean. Due to deforestation of mangroves along the shore, the coast is defenceless against soil erosion caused by sea water. Coupled with the rising sea level due to climate change, the Kipini shoreline is now prone to damage from heavier tides caused by strong winds. A local administrator estimated that that approximately a quarter of the village's residents have had to relocate.

The livelihood of those who remain is not promising. Wells which once were a source of drinking water have turned saline and villagers have to look for alternatives. The salinity of groundwater also affects farming activities, and seafood that had been a common food source is scarce now since the habitats within mangrove forests no longer exist. Even deceased persons cannot remain unaffected, as the digging of graves becomes a delicate task. Going deeper than six feet would result in the body being submerged in seawater.

This is the first Kenyan village overtaken by rising seawater. Although some locals think it is a natural course of events when the Tana River changes its course, scientists blame climate change. Whilst local authorities suggested the building of a sea wall along the coastline of Kinipi, the project has not proceeded due to a lack of funds. More importantly, the wall is not the ultimate solution to the rise in sea level as the latter will catch up sooner or later. The village is in dire need of conservative actions, for instance, restoring the mangroves.

The luxury hotel retreated from Kinipi's shoreline and relocated to another coastal town, close enough for the view but far away from the trouble. The locals do not have this choice; their village is expected to disappear in 3 years if no initiatives are taken by the authorities. Meanwhile, all they can do is check the coast every day to see if, and how far, the ocean has moved towards their home.

[BBC, 14/08/2024]

## The Mediterranean

### *Ecosystem and landscape affected by wildfire*

Unlike most ecosystems on Earth, the landscape of the Mediterranean region is not devastated when there is fire. In fact, the natural occurrence of fire is essential to many local species of plants as their seeds are protected in a hard shell that will "explode", and thus germinate, only under the heat of fire. However, as the area is experiencing its hottest summer on record, wildfires in Greece are getting out of control and the extreme heat they generate has affected several other countries, including Italy, Spain and France. The scorching heat and strong winds had fuelled the flames to expand and engulf over 100,000 acres of land in Greece by August. Scientists are now worried that the prolonged and stronger heat is more than the Mediterranean's ecosystems can bear.

Being one of the biodiversity hotspots that account for 5% of the land surface but 20% of biodiversity on Earth, the Mediterranean shares a similar strange climate pattern of hot, dry summer and wild, wet winter, which leads to frequent occurrence of fire. Research shows that some plants develop traits to cope with and recover after fires of different intensity and frequency, which in turn boost the biodiversity of forests.

A well-developed forest in the Mediterranean is self-sufficient in its protection against hazards. Some trees in the Mediterranean, for example, have thick bark that is resistant to fire and can prune dead branches by themselves. Others have succulent leaves and tissues or can preserve their roots underground to grow again after a fire. The forests as a whole grow in specific patterns that restrict airflow and fires gradually go out naturally.

However, with the development of roads and paths in forests, humans are stripping nature of its defence mechanisms. By removing fire-resistant plants and creating gaps in the originally dense vegetation, the windy and dry environment causes increased temperatures of wildfires to over 1,000 degrees Celsius, which is higher than the ecosystem is designed to withstand. The higher frequency of fire is also unnatural and forests do not have enough time to reach maturity or recover from previous fires during the shortened intervals.

Researchers expect the Mediterranean's forests to recover and regenerate into a different landscape where new plants which can better adapt to the new environment will grow and become the next generation. The ecosystem will hopefully rebalance and achieve a new normal.

[BBC, 14/08/2024]

## South Asia

### *Floods causing widespread damage*

During the recent monsoon season, several countries in South Asia have been suffering from heavy precipitation and consequential floods and landslides, which have already affected many villages and families.

In Bangladesh, the Chattogram and Sylhet regions are threatened by overflowing rivers, trapping residents without food. The flood has taken 20 lives according to UNICEF's record and hundreds of thousands of refugees in shelters have sought help. Despite governmental rescue operations, some areas are still not accessible since water levels have not receded and roads are waterlogged.

In eastern India, the state of Tripura saw extremely heavy rainfall for over 3 days. As a result, the state is flooded to a level not experienced since 1983. Over 2,000 landslides have occurred due to the extraordinary rainfall. Approximately 1.7 million people have reportedly been affected, while only one-tenth of them have been relocated to relief camps. The floods and landslides have claimed more than 20 lives, according to the UN Office for the Coordination of Humanitarian Affairs.

A glacial lake outburst flood caused severe damage in the village of Thame in Nepal, a country that has already been on the frontlines of climate change through suffering from consequential warming of glaciers in the Everest region. Thame was a popular destination for trekkers as it has a high altitude of approximately 3,800 metres. Although no serious injury was reported as a result of the flood, several residential developments, a school and a clinic were wiped out.

[UN News, 29/08/2024]

## World

### *Plastic pollution disaster*

In our oceans, if water is life, what happens when it's full of plastic pollution?

In the Indian Ocean, Atlantic Ocean and Pacific Ocean, enormous garbage islands are forming. Some, such as the Great Pacific Garbage Patch, are three times the size of France.

These giant islands of plastic waste are the tip of the iceberg when it comes to the true spread of pollutants in our oceans, and it is precious marine life, such as porpoises, whales and turtles that suffer.

In marine environments, floating bottles, bags, packaging and single-use products can be mistaken for squid or jellyfish. It is estimated that 56% of the planet's whale, dolphin and porpoise species have consumed plastic.

We know sea mammals can literally drown to death because they are entangled in plastics and can't reach the surface to breathe; or their air passages are clogged by single-use plastics.

The most beautiful ocean species on our planet are choking to death on plastics. We can only save them by working together to prevent the scourge of plastics pollution.

[*Greenpeace Press Release*, 11/09/2024]

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**Convictions under environmental legislation:  
June to August 2024 (September data not  
available)**

**[Note: the EPD no longer classifies second  
(and subsequent) offences.]**

The EPD's summary of convictions recorded and fines imposed during the above period is as follows:

*June 2024*

Thirty-seven convictions were recorded in June 2024 for breaches of legislation enforced by the Environmental Protection Department.

Three of the convictions were under the Air Pollution Control Ordinance, 17 were under the Noise Control Ordinance, 4 were under the Public Cleansing and Prevention of Nuisances Regulation, and 13 were under the Waste Disposal Ordinance.

A company was fined \$25,000, which was the heaviest fine in June, for failing to export controlled waste without a permit.

*July 2024*

Thirty-two convictions were recorded in July 2024 for breaches of legislation enforced by the Environmental Protection Department.

Three of the convictions were under the Air Pollution Control Ordinance, 9 were under the Noise Control Ordinance, 6 were under the Public Cleansing and Prevention of Nuisances Regulation, and 14 were under the Waste Disposal Ordinance.

A company was fined \$15,000, which was the heaviest fine in July, for failing to take measures to control air pollutant emission.

*August 2024*

Twenty-seven convictions were recorded in August 2024 for breaches of legislation enforced by the Environmental Protection Department.

Seven of the convictions were under the Air Pollution Control Ordinance, 6 were under the Noise Control Ordinance, 10 were under the Public Cleansing and Prevention of Nuisances Regulation, 3 were under the Waste Disposal Ordinance, and 1 was under the Water Pollution Control Ordinance.

A company was fined \$15,000, which was the heaviest fine in August, for failing to comply with the requirement of a notice.

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