



On 7 August 2021 the Intergovernmental Panel on Climate Change (IPCC) published its latest findings and predictions concerning the dramatic changes to the World's climate due to human activities. This edition gives a snap-shot overview of the IPCC's report.

IPCC

ISSUES STRONGEST

CATASTROPHES FROM GLOBAL WARMING

WARNING

YET

OF

The Editors

IMMINENT

CONTENTS

FEATURE:	Page	Introduction
IPCC ISSUES STRONGEST WARNING YET OF IMMINENT CATASTROPHES FROM		<i>Climate Change 2021: The Physical Service Basis (Summary for Policy Makers)</i> (" Report ") was published by the IPCC on 7 August 2021. For anyone with a modicum of common sense and care for the state of the earth, particularly our environment, the Report makes grim reading.
GLOBAL WARMING	1	The sub-title of the Report is: Working Group 1 (WGI) contribution to the Sixth Assessment
TOWN PLANNING	3	<i>Report (AR6) of the IPCC.</i> It was researched and compiled by more than 130 drafting authors and 80 contributing authors from a wide range of countries, including China (but not Hong
LEGISLATION DIGEST	3	Kong).
WEST KOWLOON CULTURAL DISTRICT (WKCD)	4	 The Report "builds upon the 2013 WGI contribution to the IPCC's fifth Assessment Report (ARS) and the 2018 – 2019 IPCC Special Reports of the AR6 cycle and incorporates subsequent new evidence from climate science". How important the Report is to empowering governments to tackle the world's major environmental issue is summed up in one paragraph of the Introduction:
HONG KONG BRIEFING	5	
ADVISORY COUNCIL ON THE ENVIRONMENT (ACE)	6	"This SPM provides a high-level summary of the understanding of the current state of the climate including how it is changing and the role of human influence, the state of knowledge about possible climate futures, climate information relevant to regions and sectors, and limiting human-induced climate change".
CLIMATE CHANGE	7	The Report begins with some sobering conclusions, including (but not only) the following:
REGIONAL & INTERNATIONAL	8	 Increases in greenhouse gas concentrations (GHC) since the year 1750 are <i>"unequivocally caused by human activities"</i>. Since 2011 measurements (reported in ARS) concentration of GHC in the atmosphere have continued to increase: e.g. CO₂, 410 ppm; CH₄ (Methane) = (Carbon Dioxide) – 1866 ppb and N₂O (Nitrous Oxide) = 332 ppb. Each of the past 4 decades has been successively warmer than any decade that preceded it since 1850. Global surface temperature was 1.09°C higher in 2011 – 2020 than 1850 – 1900. It is <i>"virtually certain"</i> that the global upper ocean strata (0 – 700m) has warmed since 1970s, and it is <i>"virtually certain that human – caused CO₂ emissions are the main driver of current global acidification of the surface open ocean"</i>. Global main sea levels increased by 0.20m between 1901 and 2018.
PROSECUTION STATISTICS	13	

September 2021

Summary

The IPCC issued a short executive summary of key findings of its investigations and Report, an abridged version of which is as follows:

Climate change is widespread, rapid, and intensifying

Scientists are observing changes in the Earth's climate in every region and across the whole climate system, according to the latest IPCC Report, released on 9 August 2021. Many of the changes observed in the climate are unprecedented in thousands, if not hundreds of thousands of years, and some of the changes already set in motion—such as continued sea level rise—are irreversible over hundreds to thousands of years.

However, strong and sustained reductions in emissions of carbon dioxide (CO2) and other greenhouse gases would limit climate change. Whilst benefits for air quality would come quickly, it could take 20-30 years to see global temperatures stabilize, according to the IPCC Working Group I report, *Climate Change 2021: the Physical Science Basis*, approved by 195 member governments of the IPCC, through a virtual approval session that was held over two weeks from 26 July 2021.

The Working Group I report is the first instalment of the IPCC's Sixth Assessment Report (AR6), which will be completed in 2022. "This report reflects extraordinary efforts under exceptional circumstances," said Hoesung Lee, Chair of the IPCC. "The innovations in this report, and advances in climate science that it reflects, provide an invaluable input into climate negotiations and decision-making."

Faster warming

The Report provides new estimates of the chances of crossing the global warming level of 1.5° C in the next decades, and finds that unless there are immediate, rapid and large-scale reductions in greenhouse gas emissions, limiting warming to close to 1.5° C or even 2° C will be beyond reach.

The Report demonstrates that emissions of greenhouse gases from human activities are responsible for approximately 1.1° C of warming since 1850-1900, and finds that averaged over the next 20 years, global temperature is expected to reach or exceed 1.5° C of warming. This assessment is based on improved observational datasets to assess historical warming, as well progress in scientific understanding of the response of the climate system to human-caused greenhouse gas emissions.

"This Report is a reality check," said IPCC Working Group I Co-Chair Valerie Masson-Delmotte. "We now have a much clearer picture of the past, present and future climate, which is essential for understanding where we are headed, what can be done, and how we can prepare."

Every region facing increasing changes

Many characteristics of climate change directly depend on the level of global warming, but what people experience is often very different to the global average. For example, warming over land is larger than the global average, and it is more than twice as high in the Arctic.

"Climate change is already affecting every region on Earth, in multiple ways. The changes we experience will increase with additional warming," said IPCC Working Group, Co-Chair, Panmao Zhai.

The Report projects that in the coming decades climate changes will increase in all regions. For 1.5° C of global warming, there will be increasing heat -waves, longer warm to hot seasons and shorter cold seasons. At 2°C of global warming, heat extremes would more often reach critical tolerance thresholds for agriculture and health, the report shows. But it is not just about temperature. Climate change is bringing multiple different changes in different regions – which will all increase with further warming. These include changes to wetness and dryness, to winds, snow and ice, coastal areas and oceans. For example:

- Climate change is intensifying the water cycle. This brings more intense rainfall and associated flooding, as well as more intense drought in many regions.
- Climate change is affecting rainfall patterns. In high latitudes, precipitation is likely to increase, while it is projected to decrease over large parts of the subtropics. Changes to monsoon precipitation are expected, which will vary by region.
- Coastal areas will see continued sea level rise throughout the 21st century, contributing to more frequent and severe coastal flooding in low-lying areas and coastal erosion. Extreme sea level events that previously occurred once in 100 years could happen every year by the end of this century.
- Further warming will amplify permafrost thawing, and the loss of seasonal snow cover, melting of glaciers and ice sheets, and loss of summer Arctic sea ice.
- Changes to the ocean, including warming, more frequent marine heatwaves, ocean acidification, and reduced oxygen levels have been clearly linked to human influence. These changes affect both ocean ecosystems and the people that rely on them, and they will continue throughout at least the rest of this century.
- For cities, some aspects of climate change may be amplified, including heat (since urban areas are usually warmer than their surroundings), flooding from heavy precipitation events and sea level rise in coastal cities.

For the first time, this Sixth Assessment Report provides a more detailed regional assessment of climate change, including a focus on useful information that can inform risk assessment, adaptation, and other decision-making, and a new framework that helps translate physical changes in the climate – heat, cold, rain, drought, snow, wind, coastal flooding and more – into what they mean for society and ecosystems.

Human influence on the past and future climate

"It has been clear for decades that the Earth's climate is changing, and the role of human influence on the climate system is undisputed," said Masson-Delmotte. Yet the Report also reflects major advances in the science of attribution; that is: understanding the role of climate change in intensifying specific weather and climate events such as extreme heat- waves and heavy rainfall events. The Report also shows that human actions still have the potential to determine the future course of climate. The evidence is clear that carbon dioxide is the main driver of climate change, even as other greenhouse gases and air pollutants also affect the climate.

"Stabilizing the climate will require strong, rapid, and sustained reductions in greenhouse gas emissions, and reaching net zero CO2 emissions. Limiting other greenhouse gases and air pollutants, especially methane, could have benefits both for health and the climate," said Zhai.

[IPCC PRESS RELEASE, 09/08/2021]

Conclusion

The Report only confirms what was well known and accepted by the vast majority of people, namely that human activities (particularly widespread dependence on fossil fuels) are a significant, direct cause of undoubted global warming.

Governments, including the HKSAR government, should be taking urgent, robust steps – such as phasing out coal-generated electricity – to halt the rate of increased global warming – and ideally to at least partially reverse current GHC emissions and global temperature levels.

TOWN PLANNING

Approved Tsing Yi Outline Zoning Plan amended

The Town Planning Board announced amendments to the approved Tsing Yi Outline Zoning Plan (OZP).

The amendments involve the rezoning of a site to the west of Tsing Yi Road West from "Green Belt" to "Residential (Group A) 5" for public housing development.

[Town Planning Board, 02/07/2021]

Approved Sha Tin Outline Zoning Plan referred back for amendment

The Town Planning Board announced that the Chief Executive in Council has referred the approved Sha Tin Outline Zoning Plan (OZP) to the Board for amendment to better address the latest land use proposals.

The Sha Tin OZP was approved by the Chief Executive in Council in May 2018.

[Town Planning Board, 02/07/2021]

Approved Hung Hom Outline Zoning Plan amended

The Town Planning Board announced amendments to the approved Hung Hom Outline Zoning Plan (OZP).

The amendments mainly involve the rezoning of a site south of Hung Luen Road from "Comprehensive Development Area (1)" to "Other Specified Uses" annotated "Hotel (1)" and another site at the junction of Hung Luen Road and Kin Wan Street from "Comprehensive Development Area (2)" to "Commercial (7)".

The draft Urban Renewal Authority To Kwa Wan Road/Wing Kwong Street Development Scheme Plan (DSP) No. S/K9/URA3/1 has replaced part of the draft in Hung Hom OZP No. S/K9/27.

[Town Planning Board, 09/07/2021]

Draft Urban Renewal Authority To Kwa Wan Road/Wing Kwong Street Development Scheme Plan published

The Town Planning Board announced the publication of the draft Urban Renewal Authority (URA) To Kwa Wan Road/Wing Kwong Street Development Scheme Plan (DSP) No. S/K9/URA3/1.

The scheme area covers approximately 0.66 hectares and is designated as "Residential (Group A)", and an area shown as "Road". The scheme involves high-density residential developments with commercial and government, institution and community facilities.

Pursuant to section 25(9) of the URA Ordinance, the draft To Kwa Wan Road/Wing Kwong Street DSP No. S/K9/URA3/1 will replace the draft Hung Hom Outline Zoning Plan No. S/K9/27 in relation to the area delineated and described in the draft DSP.

[Town Planning Board, 09/07/2021]

LEGISLATION DIGEST

Commencement notice for Mercury Control Ordinance gazetted

On 13 August 2021, the government gazetted the Mercury Control Ordinance (Commencement) Notice .

The *Mercury Control Bill* was passed on 23 June by the Legislative Council to implement fully the Minamata Convention on Mercury (the Convention). The objective of the Ordinance is to ensure Hong Kong fully complies with international obligations contained in the Convention and also to protect public health and the environment from anthropogenic emissions and releases of mercury and mercury compounds.

The *Mercury Control Ordinance* (Cap. 640) regulates various activities, including the import, export, keeping and use of mercury, mercury mixtures and mercury compounds, as well as the import, export, manufacture and supply of mercury-added products.

The Commencement Notice stipulates 1 December 2021, as the day on which the Ordinance comes into operation. On commencement of the Ordinance, the current interim control of elemental mercury trading under the *Import and Export (General) Regulations* (Cap. 60 sub. leg. A) will be repealed.

[Press Release, The Government of the Hong Kong Special Administrative Region, 30/07/2021]

Waste Disposal (Charging for Municipal Solid Waste) (Amendment) Bill 2018 is passed

The government has welcomed the passage of the *Waste Disposal (Charging for Municipal Solid Waste) (Amendment) Bill* 2018 (the Amendment Bill) by the Legislative Council (LegCo) on 26 August 2021.

The Bill represents a critical step towards Hong Kong's meeting its intended municipal solid waste reduction target of 40% per capita by 2022. It implements a new rubbish bag system in the city, whereby households will be charged for disposing their waste according to waste bags sizes. The system will require the mutual effort of various sectors and the general public to work effectively.

The scheme aims to adopt the following approach.

- 1. Putting in place a preparatory period of 18 months as a basic arrangement to enable the government and various sectors of the community to prepare for the charging scheme.
- 2. Devoting resources to strengthen recycling support in the community.
- Launching a public education and publicity campaign and setting up Green Outreach to provide assistance and support to different sectors through outreach services.
- 4. Adopting a risk-based approach to take appropriate enforcement action in support of the scheme.

[Press Release, The Government of the Hong Kong Special Administrative Region, 26/08/2021]

WEST KOWLOON CULTURAL DISTRICT

M+ announces three food and beverage outlets

M+, Hong Kong's museum of visual culture in the West Kowloon Cultural District, announced on 7 June 2021 three public food and beverage outlets to be opened in the museum by the end of 2021.

The outlets will include two full-service restaurants with unique dining concepts and design. One of the restaurants will be located on the waterfront promenade in the Art Park on B1 level. Another restaurant will be located in the Roof Garden on the third floor of the M+ building. These restaurants will be run by Lai Sun Dining, a hospitality group which has a total of nine Michelin stars in the group's portfolio. Lai Sun Dining will create a new dining concept exclusively for M+.

Beside the waterfront promenade museum shop a tea and coffee bar will; be operated by CURATOR Creative Cafe, a local Hong Kong brand dedicated to the art of serving fine coffee and tea.

Suhanya Raffel, Museum Director of M+, said, 'As we envision the visitor experience of the soon-to-open museum, we are thrilled to be able to deliver our ambition to create truly unique culinary concepts that provide unprecedented dining excellence within the context of M+ visual culture. Dining at M+ will be a globally inspired experience, Asian influenced and truly local. Our offerings will engage all five senses with a mission to ensure quality and service excellence while being accessible to all our visitors. We are proud to partner with Lai Sun Dining and CURATOR Creative Café in delivering this vision.'

[West Kowloon Cultural District Press Release, 07/06/2021]

Chief Projects Officer departs

The West Kowloon Cultural District Authority (WKCDA) announced the departure of Jeremy Stowe, Chief Projects Officer (CPO) from the WKCDA, effective from 22 July 2021.

The WKCDA will commence an open hiring process for a new CPO. In the meantime, Norman Heung, Acting CPO, will lead the team until the new CPO joins the WKCDA.

[West Kowloon Cultural District Press Release, 22/07/2021]

Departure of the chief financial officer

Following the recent resignation of the Chief Projects Officer, WKCDA's Chief Financial Officer, Kitty Fung Kit-yi, announced she would cease working for WKCDA on 17 August 2021.

On 17 August 2021 a Board resolution was passed that Kitty's contract would not be renewed; she left the office the following day.

WKCDA confirmed her departure and will now commence a public search for a new CFO.

[The Standard, 18/08/2021]

HONG KONG BRIEFING

Introduction of Clean Air Plan for 2035

On 29 June 2021, the government announced the Clean Air Plan for Hong Kong 2035 with a goal of improving Hong Kong's air quality to be on par with other major international cities by 2035. Air quality is closely connected to public health, which is one of the important factors in improving a city's living quality.

The government stated in the press conference that the target in the long run is to meet the standards of the World Health Organization (WHO) *Air Quality Guidelines.*

Six major areas will be covered under the Clean Air Plan: green transport; liveable environment; comprehensive emissions reduction; clean energy; scientific management; and regional collaboration.

The improvement of roadside air quality is a challenging task, and the popularisation of electric vehicles (EV) would be a key solution to achieving the improvement. Bus companies in Hong Kong have given positive feedback regarding the government's EV roadmap. They are currently working on different aspects, in order to electrify the bus fleet, in relation to both single and double decker buses.

The companies are also conducting tests on some other new energy vehicles, such as hydrogen buses. They are exploring different technologies in order to improve the roadside air pollution.

The new plan will also cover other objectives, such as maximising the use of local renewable energy and using more natural gas as a transitional energy for power generation. Hong Kong's *Air Quality Objectives* will be reviewed every five years to progressively monitor and tighten the targets.

[Press Release of the Government of the Hong Kong Special Administrative Region, 29/06/2021]

Shipping law amendments proposed

On 13 August 2021, the government proposed amending five regulations under the *Merchant Shipping (Safety) Ordinance* and the *Merchant Shipping (Prevention of Air Pollution) Regulation.*

The amendments aim to improve the safety of passenger ocean-going vessel, and, more importantly, to regulate safety requirements for ships carrying vehicles with fuel in their tanks in cargo spaces. In addition, the requirement of damage control drills for passenger ships is also set out under the new amendments.

Amendments to the *Merchant Shipping (Prevention of Air Pollution) Regulations*, are to regulate air pollutant emissions from ships by requiring those of 400 gross tonnage and above to fit or designate sampling points. The new procedure is to ensure that compliance with maximum sulphur -content fuel oil regulations can be verified.

[News.gov.hk, 13/08/2021]

Waste charging bill passed

The passage of the *Waste Disposal (Charging for Municipal Solid Waste) (Amendment) Bill 2018* by the Legislative Council on 26 August 2021 is a milestone in waste management in Hong Kong.

Municipal solid waste (MSW) charging is a common means adopted internationally to motivate the public to reduce waste and a driving force that fuels the downstream recycling industry.

The MSW charging also advances the vision set out in the Waste Blueprint for Hong Kong 2035 and forms an integral part of the development of a circular economy in the city. The government will put in place a preparatory period of 18 months as a basic arrangement to enable various sectors of the community to get prepared.

The government will also devote resources to strengthen recycling support in the community, launch an education and publicity campaign, support different sectors through outreach services and take enforcement action to back the scheme.

The government will maintain close ties with stakeholders and sectors to provide relevant practitioners with information and training. Guidelines will also be drawn up by the government to prepare for MSW charging's implementation.

[News.gov.hk, 26/08/2021]

Microbeads phase-out launched

The government today launched the Bye Bye Microbeads charter (the "Charter"), a two-year voluntary phase-out scheme to encourage the trades to stop the production, importation and sale of products containing microbeads.

The Charter covers rinse-off personal care and cosmetic products such as exfoliators and those for hair, body, facial or oral care with a view to eliminating microbeads at source and minimising their potential risk to the marine ecosystem.

Participants of the Charter can set their targets and timetables for phasing out microbeads. Retailers, hairdressing and beauty salons as well as trade associations and other interested parties will promote the charter to their business partners.

The government said the trades are keen to join the charter as part of their corporate social responsibility. The government will offer support by organising training workshops for their staff and providing certificates and stickers for display in shops or on promotional materials.

The participants and their microbead-free brands will also have their names and brand logos listed on the charter website to help consumers make responsible choices.

[News.gov.hk, 01/09/2021]

ADVISORY COUNCIL ON THE ENVIRONMENT (ACE)

Summary of Minutes of the 246th meeting of the Advisory Council on the Environment (ACE) on 10 May 2021

The key agenda item of the meeting is to provide members the annual update on progress of implementation of the 4 key action areas of Hong Kong Biodiversity Strategy and Action Plan (BSAP) 2016-2021.

(1) Measuring effectiveness

- Two Members suggested that Agriculture, Fisheries and Conservation Department (AFCD) should consider providing parameters to evaluate and illustrate the effectiveness of the current BSAP on biodiversity and nature conservation.
- Members further enquired about actions taken to control improper behaviour, such as camping outside designated areas in country parks and the criteria for evaluating the effectiveness of education in raising the awareness of the importance of biodiversity, as well as community involvement.
- The Assistant Director of AFCD advised that it would be difficult to establish parameters for an objective assessment of the effectiveness of BSAP implementation as some of the actions were difficult to be quantified.
- Yet, AFCD would work towards presenting the progress report in a manner that would facilitate public understanding.
- (2) Enhancing conservation measures
 - A member asked for the review result of the Monitoring and Management Plan of Sites of Special Scientific Interest, which was completed in 2020.
 - In response, the Senior Conservation Officer (Biodiversity) AFCD advised that the review result contained sensitive information, such as, details of patrol and enforcement functions of the Department, and therefore was not suitable for publication.
 - Any information will be shared through a web-based information hub.

(3) Stakeholder engagement

- It was suggested by a member that in order to keep stakeholders informed and to facilitate their participation in the implementation of BSAP, AFCD should publish progress reports and relevant information on the website.
- A member further suggested that a sharing session will be helpful for stakeholders to facilitate the exchange of views regarding the implementation of BSAP.
- AFCD responded that the reports and progress related to the BSAP have been shared on AFCD's website and AFCD will work closely with stakeholders and engage them where necessary.
- (4) Education and promotion
 - Members expressed concerns that there was a lack of public awareness and understanding about biodiversity and the measures taken by the government.
 - A member also suggested that the government should provide guided tours or information services at visitor centres in country parks with a view to enhancing public education.
 - The Chairman suggested AFCD leverage on the effectiveness of online media or social platforms in promoting biodiversity.

[Advisory Council on the Environment, 10/05/2021]

Summary of Minutes of the 247th meeting of the Advisory Council on the Environment (ACE) on 7 June 2021

The key agenda item of the meeting was to brief members on the targets, strategies and key measures of the new "Waste Blueprint for Hong Kong 2035" to tackle the challenge of waste management up to 2035.

Discussion covered municipal solid waste charging, waste reduction, waste separation, minimising food waste and the recycling industry. The following are important points arising from those discussions:

- 1. The government is committed to developing more infrastructure, including a new waste-to-energy facility for handling non-recyclable municipal solid waste (MSW) with advanced technology, with a goal to achieve zero landfill under the new Blueprint.
- 2. A member opined that the regulation on the use of disposable plastic tableware should be implemented shortly. The Chairman suggested that the government should begin public consultation on the implementation and arrangements for the regulation of disposable plastic tableware.
- 3. A member enquired as to progress of the review of the Plastic Shopping Bag Charging Scheme. In response the Deputy Director of Environmental Protection (Waste Reduction Policy) advised that the review had been completed and relevant public consultation would be conducted later this year.
- 4. It was observed that the public is generally supportive of practising domestic food waste separation and the Deputy Director of Environmental Protection advised that the government should explore different options, such as innovative technologies in food waste collection and processing through various pilot schemes.
- 5. A member enquired about any new measures under the new Blueprint to enhance the support for the recycling industry. It has been noticed that small to medium enterprises could not sustain their business even with the support of the Recycling Fund. The Chairman suggested that the government provide incentives to encourage small to medium businesses in contributing to the development of a circular economy.

[Advisory Council on the Environment, 07/06/2021]

CLIMATE CHANGE

Floods in Germany

A devastating scene was shown to the world as inland German towns have suffered severe floods as a result of increased rainfall, which has caused rivers and dams to burst their banks, releasing huge volumes of water into the surrounding countryside.

It was reported that towns recorded rainfalls of as much as 154 mm of rain in over 24 hours. In the city of Hagen, water levels have now risen to a level that was only seen four times in the past century. The flooding has caused 58 deaths and thousands and thousands of homes have been flooded. There have also been frequent power outages.

Climate scientists have identified climate change as the root cause of this abnormal flooding. As our climate continues to change under an overload of carbon dioxide emissions, so does the extremity of weather as we know it. Carbon dioxide emissions, which contribute to global warming, are directly linked to rising sea levels, more storms, droughts, and heatwaves.

Witnesses have said that this year's flood in Germany was not like previous floods. This flood was greater in volume and lasted longer than usual. These floods and heavy rain are consistent with the global climate trends - namely the increasing global temperatures are causing more extremes in terms of the scale of intensity of floods and storms.

[The Guardian, 16/07/2021]

California wildfires: human error or nature's wrath?

Massive wildfires have officially spread to many regions of California and are continuing to burn furiously. Having been in flames for 3 weeks and counting, the remote mountains in California have once again received another spike in wildfire rates. The cause has been determined to be increasingly high temperatures within the area, which have also sparked other wildfires throughout the country.

The most serious of the Californian wildfires is the Dixie fire, which is now only 35% contained within the 200,000 acres it occupies. In California alone, there are 11 active wildfires which fire departments are currently having a hard time battling. Currently, there are also 25 wildfires in Montana and 21 in Idaho.

This spike in wildfires over the past few months is proportionally related to the increase in weather and temperature fluctuations due to the effects of climate change. As the west coast has shown signs of hotter temperatures and more drought affected regions, the probability for wildfires and other unprecedented weather extremities has increased significantly.

Fire tornados, hazes, and pyrocumulus clouds are all examples of climate-change weather extremities that have now become the norm in this climate revolutionised world. This has resulted in major destruction and the displacement of residents of former towns-destroyed by wildfires. The addition of strong winds has exponentially increased the spread of the wildfires, making them almost uncontainable.

[The Guardian, 04/08/2021]

Climate change ignites wildfires in Greece

A new front of wildfires has spread through Greece, including in the outskirts of Athens. As wildfires approach the city, they have wreaked havoc and forced many people to evacuate. The severe fires have come during the worst heatwave in recorded Greek history.

In the north of Athens, many are fleeing the fire in their vehicles as they escape a sky of smoke looming behind them. There have been 150 separate fires recorded around the north of Athens. Authorities have only 20 water bombing aircraft to assist on-ground fire-fighters to fight the fires. Greece has asked neighbouring countries, such as France and the UK, to send firefighters and planes to help the Greece's embattled fire-fighters.

Temperatures have risen to as high as 42 Celsius in the Greek capital, which is experiencing its hottest summer in almost 35 years. This intense heatwave has also struck many other parts of the Mediterranean, including Italy, Turkey, Albania, and outlying islands. The increasing temperatures due to climate change are suspected of being the main cause of more frequent heat waves around the world.

[BBC, 07/08/2021]

Italy records hottest temperature in Europe

The island of Sicily is experiencing a heat wave. The recent maximum of 48.8 Celsius could be the hottest temperature ever recorded in Europe. This temperature reading still needs to be confirmed by the World Meteorological Organisation. Regional authorities., however.

If confirmed, then this recorded temperature will replace the current hottest temperature recorded in Europe which is 48 Celsius, registered in Athens in 1977.

Italy's health ministry has issued "red" alerts for extreme heat, and the number of cities that face the highest health risk is expected to rise from 8 to 15 by the end of the week.

The heat wave is caused by an anti-cyclone named Lucifer. An anti-cyclone occurs when there is a downward movement of air over a high-pressure area.

Lucifer is forecast to move northwards through the country, bringing very hot weather to other major cities, such as Rome.

Firefighters have been battling wildfires caused by the heat wave, which have affected southern Italy, Sicily, Calabria, and Puglia.

Wildfires have also been reported in Turkey, California, and Greece, where firefighters continue to battle fires on a vast scale.

[*BBC*, 13/08/2021]

REGIONAL & INTERNATIONAL

AFGHANISTAN

Convergence of climate risks and conflict

As the Taliban seized control of Afghanistan, experts warn hazards of war together with severe drought worsens the humanitarian crisis faced by the Afghan citizens.

Afghanistan is suffering its second drought in four years, due to higher temperatures. Over the past 60 years, average temperatures have risen sharply, by 1.8 degrees Celsius, in the country as a whole. Spring rains have declined, most acutely in northern Afghanistan, where farmers rely heavily on the rains to grow crops.

Before the Taliban takeover, 40 percent of crops have been lost to the drought this year, further heightening food insecurity and affecting approximately 35 percent of Afghanistan's population-- or 14 million people--according to the World Food Programme, the food-assistance branch of the United Nations.

"The war has exacerbated climate change impacts. For 10 years, over 50 percent of the national budget goes to the war." said Noor Ahmad Akhundzadah, a professor of hydrology at Kabul University.

The collapse of the government has also made Afghanistan's participation in the next international climate talks uncertain, said Ahmad Samim Hoshmand, who had been a government official in charge of enforcing the country's ban on ozone-depleting substances. Shortly before Taliban seized Kabul, he fled to Tajikistan.

Ramiz Alakbarov, the United Nations humanitarian coordinator for Afghanistan, urged Western countries to keep funding its work in Afghanistan despite the Taliban takeover. "The effects of the severe drought are compounded by conflict and the Covid-19 pandemic in a context where half the population [18.5 million people] were already in need of aid."

[The New York Times, 30/08/2021; Climate Home News, 08/09/2021; Reuters, 17/08/2021]

ICELAND

World's biggest carbon-removal plant commissioned

On 9 September 2021 the world's largest installation designed to capture carbon dioxide from the atmosphere began operating in the outskirts of Reykjavik in Iceland. The plant is named Orca, taken from the Icelandic word "Orka", meaning "energy".

Orca, jointly run by Switzerland's Climeworks and Iceland's Carbfix. Climeworks, has developed chemical filters to draw CO_2 into a collector. Once the filter material is filled with CO_2 , the collector is closed, and the temperature is raised to release the CO_2 to Carbfix.

Carbfix pipes the gas to wells, mixes it with water and injects the resulting carbonated water to a death of 1,000 metres into basalt rocks, which contain minerals that react with carbon dioxide to form calcium carbonate, a white crystal that is the main ingredient in limestone. Essentially,

the full operation extracts CO_2 from air and turns it into rock. Trials have shown that the CO_2 -water mixture turns to stone in about two years. The plant is powered by a nearby geothermal power station.

The technology is still costly and might take decades to operate at scale. According to current estimates, Orca will capture 4,000 tonnes of carbon dioxide a year, of 35 billion tonnes the world produces by burning fossil fuels. It costs Orca between US\$600-800 to extract one tonne of carbon dioxide. The CO₂ offset package is sold to customers for approximately US\$1,200 per tonne.

Other than Climeworks, Carbon Engineering, a Canadian company, is developing a different method to operate its own carbon-absorbing technology. With such technology innovations, combined with nations adopting realistic policies for reducing greenhouse gases emissions, there is hope that net-zero target can be achieved by the middle of this century.

[The Guardian, 09/09/2021; The Economist, 18/09/2021]

INDIA

Madras High Court delivers double blow to notorious polluter

A team of ELAW partners, including Adv. T. Mohan and Adv. A. Yogeshwaran, with senior Adv. R. Vaigai as lead counsel, along with other Chennai-based lawyers, successfully challenged an attempt by Sterlite Copper, a unit of global mining conglomerate Vedanta Ltd., to re-open its plant, which was ordered closed in 2018 after many years of toxic operations. In the 10 years that ELAW has been involved in the campaign, other partners have also contributed to the efforts to expose the company's polluting ways.

The Madras High Court denied the company's application for permission to recommence operations and the Court had found Vedanta-Sterlite responsible for a disastrous sulphur dioxide (SO2) leak in 2013 which affected thousands of residents in Thoothukudi, a port city on the Gulf of Mannar in Tamil Nadu.

Nityanand Jayaraman, who has been part of the campaign to hold Vedanta accountable for 16 years writes: "Thank you to ELAW for the technical critiques and expert opinions, analysis and presentation of international best practices, and legal memos on various aspects of case law relating to closure of polluting units. Please know how much your contributions over more than 10 years have helped people here!"

This judgment was hard won, coming after 24 years of litigation, advocacy and strong community resistance. In May 2018, tens of thousands of community members protested to demand an end to Sterlite's operations which were poisoning them. Police opened fire on protesters, killing 13 and injuring hundreds. The facility, whose license renewal was denied by the Tamil Nadu Pollution Control Board (TNPCB), was ordered to be permanently closed by the Tamil Nadu Government. Sterlite responded by mounting a major litigation campaign to re-open the plant.

The High Court proceedings marked a key moment in the community's long fight against Sterlite. Those challenging Sterlite had to make a strong case that the TNPCB's response was justified, given Sterlite's long history of flouting environmental protection standards. ELAW Staff Attorneys provided court decisions from other countries upholding closures of highly polluting facilities, rather than simply imposing a fine, and decisions emphasizing that industries must comply with conditions designed to protect the environment and public health. The High Court agreed with these principles, declaring that the TNPCB and state officials were "fully justified" in ordering closure based on Sterlite's long history of non-compliance.

The High Court also criticized Sterlite and the TNPCB for failing to ensure that an adequately-sized buffer zone (green belt) was established around the facility and sufficiently planted with trees. Green belts are so important, according to the Court, that authorities would have been justified in closing the Sterlite plant based solely on the company's failure to maintain a buffer zone.

Most importantly, the High Court decision reinforces a theme that runs through decades of Indian jurisprudence: the environment must be protected for future generations.

[Elaw Press Release, 10/09/2021]

INTERNATIONAL

COP26: what will China offer at the climate change summit?

Climate experts have suggested that the joint announcement of AUKUS on 15 September 2021 was bad timing ahead of the United Nations Climate Change Conference (COP26) to be held in Glasgow in November 2021.

AUKUS is the new trilateral security partnership between the US, the UK and Australia focusing on the Indo-Pacific region. The partnership has been interpreted as seeking to counterbalance Chinese expanding military footprint in the region.

As the world's biggest carbon emitter, China is crucial to hopes of success at COP26. China produces 28% of global emissions, compared with the UK's 1%. Richard Black, director of the Energy and Climate Intelligence Unit (ECIU), commented that China is also the biggest energy financier and has the biggest market, so its decisions are crucial in influencing regional policies with transition away from fossil fuels.

The USA's climate envoy, John Kerry, and Alok Sharma, the UK's president of the COP26 talks, have both visited China in recent weeks. However, on 19 September, Mr. Sharma admitted that Mr. Xi Jinping was yet to commit to attending COP26.

Tom Burke, founder of the E3G environmental thinktank, said it is difficult to understand the timing of announcing the AUKUS initiative. "It does not appear to suggest that the [UK] prime minister is taking Glasgow very seriously."

Keir Starmer, the leader of the UK Labour Party, has stressed the importance of the UK working with China on climate issues. "With COP26 around the corner, the UK's approach to China matters", he said.

Less than a week after AUKUS was announced, Xi Jinping, in his pre-recorded video address to the United Nations General Assembly, has pledged that China would not build new coal-fired power plants abroad. Xi's gesture helped to ease fears that US-China tensions would affect commitments on combating the global threat of climate change.

"Climate diplomacy relies upon an understanding of the scale of the crisis and the self-interest states have in strong and robust climate action. It is not a question of deals or transactions; it is a common fight", said Laurence Tubiana, chief executive of the European Climate Foundation and a former French diplomat who oversaw the Paris talks.

[The Guardian, 16/09/2021; Sky News, 19/09/2021; BBC, 22/09/2021; Financial Times, 22/09/2021]

This Quarterly Report does not constitute legal advice given on any particular matter. Whilst all effort has been made to ensure completeness and accuracy at the time of publication, no responsibility is accepted for errors and omissions. Further information and enquiries in respect of this quarterly should be directed to Fred Kan & Co.

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Convictions under environmental legislation: June to August 2021 (September 2021 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 2021

Sixty-seven convictions were recorded in June 2021 for breaches of legislation enforced by the Environmental Protection Department.

Three of the convictions were under the Air Pollution Control Ordinance, 6 were under the Noise Control Ordinance, 40 were under the Public Cleansing and Prevention of Nuisances Regulation, 16 were under the Waste Disposal Ordinance and 2 were under the Water Pollution Control Ordinance.

A company was fined \$22,000, which was the heaviest fine in June, for contravening the provisions of a licence.

July 2021

Seventy-five convictions were recorded in July 2021 for breaches of legislation enforced by the Environmental Protection Department.

Five of the convictions were under the Air Pollution Control Ordinance, three were under the Environmental Impact Assessment Ordinance, four were under the Noise Control Ordinance, 46 were under the Public Cleansing and Prevention of Nuisances Regulation and 17 were under the Waste Disposal Ordinance.

A company and a person were involved in different cases of importing controlled waste without a permit. A \$15,000 fine, which was the heaviest fine in July, was imposed on the company and the person for each of their offences.

August 2021

Seventy-three convictions were recorded in May 2021 for breaches of legislation enforced by the Environmental Protection Department.

Six of the convictions were under the Air Pollution Control Ordinance, 3 were under the Noise Control Ordinance, 43 were under the Public Cleansing and Prevention of Nuisances Regulation, 4 were under the Product Ecoresponsibility Ordinance, 14 were under the Waste Disposal Ordinance and 3 were under the Water Pollution Control Ordinance.

A company was fined \$24,000, which was the heaviest fine in May, for failing to take measures to control air pollutant emission.

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