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A preliminary assessment of the impacts, implications and opportunities of COVID-19 on the coastal and marine environment and resources

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The COVID-19 pandemic exemplifies how human impacts on the natural ecosystems can result in a widespread environmental, social and economic consequences across the globe, including Malaysia. The need to enhance environmental and biodiversity protection is more apparent than ever. Year 2020 has in fact become a year of reflection and opportunity to improve our actions on safeguarding the coastal and marine environment, resources and biodiversity at large, as well as related sectors and industries. This brief piece examines some of the impacts and implications seen in addressing the pandemic, and the way forward.

Introduction

The world has been transformed in just the last few months. Thousands of people have died, with hundreds of thousands more fallen ill from a coronavirus that first appeared in the city of Wuhan, Hubei province, China in December 2019. The infectious respiratory disease was later named as COVID-19 by the World Health Organisation (WHO). As of 20th May 2020, the outbreak has affected over 5,194,000 people and killed more than 334,600 people in over 200 countries throughout the world.

The COVID-19 pandemic has been acknowledged to be among the most crucial global health calamity of this century. It spread rapidly around the globe, posing serious health, economic, environmental and social challenges to the human population. In the absence of any clinically approved antiviral drug or vaccines unfortunately, countries continue to struggle to slow down the transmission through various means including quarantine measures, restricting large gatherings, maintaining either a complete or partial lockdown in many parts of the world, as well as testing and treating those affected.

The pandemic brought direct and indirect impacts on the associated coastal and marine sectors including shipping, fisheries and tourism. For instance, the World Economic Forum discussed that maritime shipping saw COVID-19 associated drops in activity of up to 30 percent in some regions with the slump in demand for goods. Lockdowns and reduced demand for seafood have seen fishing activity fall in some regions. The Food and Agriculture Organisation of the United Nations (FAO) in April 2020 emphasised that the fish sector is subjected to indirect impacts of the pandemic through changing

consumer demands, market access or logistical problems related to transportation and border restrictions; which in turn pose damaging effects on fishers and fish farmers' livelihoods and food security. Furthermore, according to the World Tourism Organisation, countries dependent on ocean and beach associated tourism have shut their borders which has in turn caused an impact of almost US$7.4 billion loss and put some 75 million jobs at risk.

It is observed that adverse impacts on the economic sectors and GDPs are widely discussed; more prominently however, environmental changes stole the limelight in numerous media and reports showcasing unexpected positive consequences as a result of the actions taken by governments to curb COVID-19. For instance, there were highlights of leatherback turtles returning back to the beaches in Thailand during the lockdown period, the Himalayas were said to be visible from Delhi for the first time in many years, dolphins were seen closer to the shores in Istanbul with many other rare wildlife sightings emerging in most unexpected places i.e., over 100,000 flamingos reportedly descend in Mumbai coasts, and improvements seen in the air quality index and rivers in Malaysia, to name a few examples. It has been largely observed in this circumstances that nature can heal itself if given the attention it needs. The pandemic had achieved in a short period of time what many conferences on biodiversity protection, ocean conservation, or climate change, could not over decades.

Impacts and implications on the environment and resources

Over past several decades, environmental issues remained to be among the most challenging to address. Global environmental changes including biodiversity and ecosystems lost, climate change, ozone layer depletion, pollution, urbanisation, and natural resources depletion created an indisputable threat to the world and human health. For instance, the landmark report from the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) in 2019 showed nature declining globally at rates unprecedented in human history. The assessment ranked five major drivers of change in nature, and these in descending order, include (i) changes in land and sea use, (ii) direct exploitation, (iii) climate change, (iv) pollution and (v) invasive alien species. The report however emphasised that it was not too late to make a difference, if actions were taken from the local to global level. The report further emphasised on the need for transformative change across technological, economic and social factors.

As most industries, transport networks and businesses were closed in addressing this pandemic, it brought about changed in carbon emissions around the world. Pollution and greenhouse gas (GHG) emissions reduced across many countries from efforts to restrict transmission of the pandemic. For instance, publications show that the levels of pollution in New York reduced by nearly 50 percent due to measures taken to contain the virus. In China, emissions fell about 25 percent in the first quarter this year as people stayed at home. Satellite images from Europe also show reduction in nitrogen dioxide emissions over Italy, Spain and the UK. Pollution level in tourist areas is shown to shrink due to the social distancing measures adopted by governments. Some cities indicated experiencing

a clear sky after a long time, the ozone layer has been found to revive to some extent. Only such and immediate and existential threat like COVID-19 could lead to such a profound change in such a short time.

How environmental changes hurts the ability to combat pandemics, and opportunities

The World Economic Forum emphasised that the frequency of disease outbreaks is on the rise with some 12,000 recorded outbreaks between 1980 and 2013 alone, comprising of 44 million individual cases worldwide. These is said to be largely contributed by a number of trends including high levels of global travel, trade and connectivity, and high-density living; but the links to climate change and biodiversity loss are the most striking.

Deforestation has been pointed out as the single most important reason for the steady increase of outbreaks such as Ebola, and the Zika and Nipah viruses. Deforestation drives wild animals out of the natural habitats closer to the human populations, which in change creates a greater opportunity for the spread of zoonotic diseases. Despite the availability of technology and research advancements, protecting the natural world is therefore a must.

Envisaged environmental implications post COVID-19 and way forward

There is a crucial need to learn from past mistakes to chart a realistic path with concrete actions hereon to address environmental and resources protection needs. As an

example, it is feared that although some reduction in GHG has been observed as a result of the pandemic, this might not have a lasting impact on the total accumulated GHG emissions over the last few decades. This will come to show that there is a need for long term structural changes in countries' economies. Moreover, the current decrease in GHG emissions is thought to be only temporary. Once the pandemic is over, it is feared that countries will revive their economies, with the emissions to increase again. A lasting change can only be achieved through effective ratification and implementation of the environmental commitments made, and actions adapted to the 'new normal' post pandemic. For instance, drastic actions taken by governments, though not directly targeted at environmental means, has brought along numerous positive opportunities for nature to heal itself in the process. These could be exemplified in the near future to 'walk-the-talk' on fulfilling environmental needs.

More specifically at the national level, there is a need to focus on COVID-19 stimulus packages to include also the sea modes of operations, in addition to the current focus on land-based industries and communities. For example, people that depend on ocean tourism should not be abandoned during the pandemic recovery phase. Recovery funds and financial aids could help in hiring people to restore coastal ecosystems such as coral reefs and mangroves, given the massive return on investments such ecosystems deliver to the tourism sector.

Other possible actions should entail investing in nature-based solutions, as well as through enhanced implementation of existing and/or revised/new policy instruments that

are integrative, informed, and adaptive for the transformation needed. There also need to be better coordinated actions at the different platforms including at local, national, regional, and international levels to safeguard and restore habitats for sustainable development.