

Mini Review

Volume 12 Issue 4 - October 2020
DOI: 10.19080/OFOAJ.2020.12.555845

Oceanogr Fish Open Access J
Copyright © All rights are reserved by : Yasar N Kavil

Vulnerability of the Ocean by the Impact of Pandemic COVID-19



Radwan Al-Farawati¹, Yasar N Kavil^{1,2*}, Hassan Alshemmari² and Adnan J Turki¹

¹Department of Marine Chemistry, Faculty of Marine Sciences, King Abdulaziz University, Saudi Arabia

²Environment & Life Sciences Research Center, Kuwait Institute for Scientific Research, Kuwait

Submission: September 26, 2020; **Published:** October 22, 2020

Corresponding author: Yasar N Kavil, Department of Marine Chemistry, Faculty of Marine Sciences, King Abdulaziz University, P.O. Box 80207, Jeddah 21589, Saudi Arabia

Abstract

The very recent pandemic issue, COVID-19 has made a huge impact in all the field irrespective of the nations. The issue has not resolved yet and the scientific world is trying to discover the vaccine against COVID-19. The lock down effect of this pandemic issue has made a small-time scale positive impacts in the environment by reducing the anthropogenic pollution. However, the economy of each country has declined drastically even in the developed nations. In some countries, maritime shipping has seen COVID-19-associated declines in activity of up to 30 percent. In China and West Africa, lockdowns and decreased demand for seafood have seen fishing activity dropping by as much as 80 percent. Entire nations dependent on tourism related to oceans and beaches have closed their borders. These changes have made a huge impact on blue economy and the small-scale fishing industry. The use of mask is compelled to everyone, which is rather a necessity, but improper waste management will deteriorate the environment badly. Due to the unprofessional disposal of huge quantities of mask to the environment from various sources may end up in the marine environment and negatively impact the marine ecosystem as well.

Keywords: COVID-19; Ocean; Small Scale Fishing; Waste disposal

Introduction

The latest 2019 coronavirus (2019-nCoV) or the now-called extreme acute respiratory syndrome corona virus 2 (SARS-CoV-2) is rapidly spreading to the rest of the world from its origins in Wuhan City, Hubei Province of China [1]. The number of infected people is increasing day by day with a high number of mortalities. As of 22-09-2020 around 31.63 million peoples were affected by corona in the worldwide and the reported death were 971,800 [2]. Even though, many of the countries have a good recovery rates, the situation is not cured, and it will be a threaten until the discovery of proper vaccine against the COVID-19. COVID-19's drastic global economic downturn is having an omnipresent effect not only on employment, economies and governments, but also on terrestrial and marine ecosystems.

In the short term, the effect of COVID-19 on ocean health has been largely positive due to the reduction of various sectoral pressures resulting from pollution, overfishing, habitat loss / conversion, the introduction of invasive species and the impact of climate change on the oceans. Although the ocean may benefit from some near-term benefits, it could seriously affect the

livelihoods and food security of tens or even hundreds of millions of people. Participants rated the following ocean sectors as most influenced by COVID-19 in a recent informal survey conducted by the Economist during one of its World Ocean Initiative webinars: tourism 70.7 percent, fisheries 10.4 percent, offshore oil and gas 7.2 percent, shipping 6.2 percent, offshore renewables 2.9 percent and aquaculture 2.6 percent.

Impacts of the Covid-19 Pandemic on Ocean Security and Sustainability

The pandemic of Covid-19 will intensify the void in offshore law enforcement, as coast guards and navies look inward rather than patrol the seas to handle domestic crises. Legal industrial fishing activities, on the other hand, are likely to decrease, especially over the near term, owing to the combination of the risk of pandemics at sea and the supply chain problems caused by market closures. The last time the fishing industry was affected on a similar scale by a global crisis was World War II. The United Nations (UN) and other bodies such as the International Monetary Fund (IMF) have observed that the pandemic is going to increase global inequality

and threaten a global economic crisis that appears to be already underway. An additional 8 percent of the world's population are expected to fall into poverty [3].

In the data-poor regions of the developing world, the lack of up-to-date ocean science data would be extremely troublesome, because climate change means fish are on the move. Therefore, sustainability management relies more than ever on precise, timely data. The COVID-19 pandemic is making it more difficult to obtain good data. It is a fact that the COVID-19 can be resisted by social distancing and face mask use up to an extent by the guidelines of WHO. People are forced to use the mask because of this pandemic

issue, and it will speed up environmental pollution due to the lack of a proper waste management system and eventually it will end up in the marine system. While disposable face masks are specifically intended to protect healthcare professionals who are eligible to use and dispose of them to prevent workplace hazards, during the 2003 SARS outbreak and COVID-19 in 2019, untrained professionals used face masks [4,5]. The figure 1 showing the impact of irrational disposal of mask in the surroundings and its existence in the Ocean. Unprofessional use of these face masks, as a toxic waste epidemic and as microplastic contamination in the marine and freshwater environments, leads to significant environmental problems.



Figure 1: The impact of irrational disposal of mask in the surroundings and its existence in the Ocean (Source: Francesca Giuliani-Hoffman, CNN).

The Direct and Indirect Effects of the COVID-19 Pandemic on Fishing

The dramatic consequences of COVID-19 for the Small-Scale Fishing (SSF) industry are becoming evident. A pre-existing propensity to underplay the role of fish in food systems is arguably uncovered by indiscriminate lockdowns on fishing activities [6]. In India, fisheries were initially completely closed down (as opposed to agriculture) and fishing was only permitted to resume operations within some boundaries after considerable pressure from civil society pointing to their vital role in food supply [7]. The figure 2 shows the lockdown impact of fishing activity in India. A significant decrease in demand (particularly from Asia, the United States and Europe), port closures, loss of access to cold storage, and cessation of shipping and air freight [8] have been experienced by export oriented SSFs. It also affects SSFs aimed at local markets. In the Philippines, slashed rates have dramatically reduced fishing activity due to reduced demand from

local restaurants and hotels, and factories are closed or running at reduced capacity [9].

Fishers, processors, and vendors also face risks of spread and contamination of COVID-19, and therefore must make tough choices-feeding or risking exposure to their families. Due to the migratory nature of fishermen and the frequency of foreign visitors [10], fishing communities and ports might potentially become "hotspots" for rapid infection. Due to public health initiatives to minimize COVID-19 spread, there has been a drastic change in all food supplies favoring retail over restaurants in high-income countries. As restaurants usually sell more costly live and fresh seafood, markets for these items were limited by restaurant closures. Lower demand at restaurants in the European Union resulted in a 30 percent decline in the price of imported live fresh seafood. These drastic declining of business due to the current pandemic issues made a huge poverty in the low-income countries as well.



Figure 2: Impact of COVID-19 lockdown on the fishing activities (Source: Juinor Vikatan).

Conclusion

The pandemic of COVID-19 poses significant challenges for the global small-scale fishing industry. Although there are some positive measures and effects, the negative consequences are likely to be far outweighed, particularly for the groups most vulnerable to these changes. The situation, in addition, is far from over. Long-term crises linked to economic difficulties and global food crises are likely to follow the short-term impacts which we have outlined here. COVID-19 has shown just how closely connected the ocean is to our economies and well-being. The need to introduce blue into COVID-19 'green recovery' discussions is evidenced by these actions.

Acknowledgement

The authors are thankful to the Department of Marine Chemistry, King Abdulaziz University and SCRC-Kuwait for the support.

References

1. Wang C, Horby PW, Hayden FG, Gao GF (2020) A novel coronavirus outbreak of global health concern. *The Lancet* 395(10223): 470-473.
2. World meter: COVID-19 Coronavirus Pandemic.
3. Sumner A, Hoy C, Ortiz-Juarez E (2020) Estimates of the impact of COVID-19 on global poverty. *UNU-WIDER working paper*, 2020/53.
4. Elachola H, Ebrahim SH, Gozzer E (2020) COVID-19: Facemask use prevalence in international airports in Asia, Europe and the Americas, March 2020. *Travel Med Infect Dis* 35: 101637.
5. Yang P, Seale H, Raina MacIntyre CR, Zhang H, Zhang Z, et al. (2011) Mask-wearing and respiratory infection in healthcare workers in Beijing, China. *Brazilian J Infect Dis* 15: 102-108.
6. Béné C, M Barange, R Subasinghe, P Pinstrup-Andersen, G Merino, et al. (2015) Feeding 9 Billion by 2050 - Putting fish back on the menu. *Food Security* 7(2): 261-74.
7. Mohan V (2020) Centre exempts marine fishing operations and related activities from the lockdown restrictions. *The Times of India*, April 11, 2020.
8. Orłowski A (2020) Small-scale fishermen suffering significantly from COVID-19 pandemic. *Seafood Source*.
9. Ocampo K R (2020) Fishing communities bear brunt of lockdown. *Philippine Daily Inquirer*, Inquirer Group of Companies, Philippines.
10. Food and Agriculture Organization (FAO) (2020) How Is COVID-19 affecting the fisheries and aquaculture food systems. *Food and Agriculture Organization of the United Nations*, Rome.



This work is licensed under Creative Commons Attribution 4.0 License
DOI: [10.19080/OFOAJ.2020.12.555845](https://doi.org/10.19080/OFOAJ.2020.12.555845)

**Your next submission with Juniper Publishers
will reach you the below assets**

- Quality Editorial service
- Swift Peer Review
- Reprints availability
- E-prints Service
- Manuscript Podcast for convenient understanding
- Global attainment for your research
- Manuscript accessibility in different formats

(Pdf, E-pub, Full Text, Audio)

- Unceasing customer service

Track the below URL for one-step submission

<https://juniperpublishers.com/online-submission.php>