GLOBAL COVID-19 SITUATION REPORT: UPDATE

By: INFOFISH

The global seafood industry is going through its toughest time in living history as the coronavirus slams almost every country in the world. China is recovering slowly, while the US, Europe, and much of Asia are in varying stages of battling the onslaught of the virus, which continues to take an unprecedented toll on millions of lives and livelihoods. This Situation Update was prepared using information from a range of sources.

Overview

As was mentioned in an earlier Situation Report published in the INFOFISH International (March/April 2020 issue), China had implemented lockdowns in Hubei and other provinces. Most businesses, including manufacturers, were ordered to suspend operations; international airlines cancelled flights to and from China, restaurants and retail outlets were mostly closed, and major cities were eerily quiet. Not only did the coronavirus bring much of the seafood trade in China to a screeching halt, it also had a domino effect on the global seafood trade, not least because it had happened during the peak Lunar New Year season.

The dire situation faced by exporters of crab, salmon, lobster, shrimp, and fish from Russia, Canada, Ecuador, Chile, Australia, New Zealand, India, and Vietnam, was outlined in that Report. At a time when peak sales to China had been expected, these exporters scrambled to find alternative markets, or made the decision to stop harvesting, or (in the case of live product such as lobster) return catches to the sea. If nothing else, it pointed to the danger of over-dependence on the Chinese market. It also highlighted the steep rise of e-commerce in China, a trend which is likely to continue for some time yet.

In this May/June 2020 issue of the INFOFISH International, we present an update on the continuing impact of Covid-19 on the world seafood market, again using information gathered from a wide range of sources. When the final toll is counted, perhaps by the end of this year at the earliest, the Covid-19 pandemic may well turn out to be the biggest global challenge in living history in terms of lives and livelihoods lost. At the same time, it may also bring about unintended consequences in the way that seafood is sourced, marketed and consumed. Only time will tell.

By 18th April, the number of infected persons in 201 countries had exceeded 2.3 million, with 160 448 deaths and 595 519 recoveries.

As China began to recover (the lockdown in Wuhan was lifted on 8th April), the virus had spread worldwide with the most affected five nations in terms of number of deaths being USA, followed by Italy, Spain, France, and the UK. Restrictions on movements of people with varying degrees of severity were imposed in these, and many other countries, with obvious and predictable effects on retail trade, including seafood.

In global financial terms, The Fish Site’s report on its talk with Dr Beyhan de Jong, food and agribusiness specialist at Rabobank, is interesting. Dr de Jong predicts that the impact of the virus looks likely to be closer to that of the 2008 global financial crisis of 2008-2009, rather than to SARS due to the fact that the Chinese and global economies are much more closely linked since the outbreak of the latter, back in 2003. If the forecast for the Chinese economy to grow 2% slower than anticipated in 2020 is correct, then global growth rates will drop by 1%. Meanwhile the United Nations has estimated that the coronavirus outbreak could cost the global economy up to US$2 trillion this year. Also, according to S & P Global Ratings, the economic growth across the Asia-Pacific will slow down to 4% while the overall economic damage through this year is likely to reach US$221 billion.

As at the end of March, the majority of the governments in Europe, North America, and Asia had announced fiscal recovery packages and aid programmes.

China: Early indications of recovery

By the beginning of April, China was reported to be slowly opening to trade, receiving limited imports of food, including seafood, although still not yet in fresh or live forms.

Russian king crab exporters, who had lost their golden opportunity to supply China with live crab during the Lunar New Year, are keeping a close watch on the situation. In Bangladesh, it was reported that almost 500 000 mud crab farmers are struggling to repay high interest loans from banks and money lenders, as well as having to think of what to do with the unsold crab that never made it to China. A similar situation exists in Kerala, where the small-scale fishermen
involved in collecting live red crab for shipment to China have had to cease operations for the time being due to restrictions on live trade.

Rock lobster exports from Australia, New Zealand, South Africa, and North America were another casualty of the closed Chinese market. Wholesalers in Australia have asked for government assistance to tide them over their huge losses due to the unsold lobster and scallop, and they have launched a social media campaign to increase domestic seafood consumption.

As at the end of March, Chile had not resumed salmon exports to China, preferring instead to focus on other countries (Brazil, US, SE Asia) for the time being in the hope that exports can be redirected back to China in due course. Unfortunately in the meantime, Covid-19 had begun to pose serious threats to these alternate markets, particularly the USA where the number of infections was the highest in the world by the end of March.

Major shrimp producers and exporters Ecuador, Vietnam, Indonesia, and India remain in the same situation as the salmon exporters mentioned above. According to the Vietnam Association of Seafood Exporters and Producers (VASEP), the volume of shrimp and other seafood exports from Vietnam to China is expected to fall by about 40% in the first quarter of this year as compared to 36 711 tonnes in the same period in 2019. Ecuador, which was optimistic about the resilience of the Chinese market (re: 11th February press release from the National Chamber of Aquaculture), is keenly keeping watch on the situation to ascertain when shrimp exports can resume. China, before the outbreak of Covid-19, was the top market for their product, and so the closure had a huge impact on sales from Ecuador. Indonesian and Indian shrimp exporters, who were badly hit by the loss of business in China, and who had started to diversify their markets to other destinations, were unfortunately then hit by the spread of the virus to main markets in Europe and North America.

In late March, Chinese buyers of pangasius from Vietnam had just started to reactivate imports, although prices remain low to date. In 2019, China was the main destination for Vietnamese pangasius, which was valued at US$28.6 million, up 37% from 2018. Overall though, VASEP said in a statement dated 24th March that “Due to impacts from the Covid-19, the production and trading activities of seafood companies have been seriously affected, especially in the first two weeks of March”.

Unprecedented disruptions in global supply and sales

As at 18th April, the countries with the highest number of (reported) infections were the US with over 737 000 cases, followed far behind by Spain, Italy, France, Germany, UK, and China. That the epicentre had moved from China to the US and Europe, the two biggest markets for seafood in the world, meant devastating losses for everyone in the retail trade and food service sector. With these losses came another huge problem: a steep rise in the numbers of people who suddenly became unemployed and therefore unable to provide for their families.

Productivity has also been affected throughout the world as social distancing rules and other emergency regulations keep people at home, and non-essential business premises closed. In some instances, flexibility has been suggested; for example, the World Tuna Purse Seine Organization has asked the Parties to the Nauru Agreement countries to temporarily relax vessel observer requirements so they can continue harvesting. Similarly in Europe, the EU fish processors and traders association (AIPCE-CEP) has recommended some relaxations in the import procedures for seafood.

Asia and the Pacific

On 24th March, India came under a lockdown period until 3rd May as the official number of infected persons reached 15 722, with fears that up to 1.3 million cases could result if stringent measures were not taken immediately. Grocery shops, banks, hospitals and other essential services remained open, but all forms of transport including air and rail, were suspended, except for those dealing with essential goods.

According to the Economic Times, the lockdown will cost India about US$120 billion (EUR 111 billion), or 4% of its GDP this year.

By March, squid and cuttlefish exporters were particularly worried as Chinese demand had dropped significantly during the first two months of the year, and hopes of increasing volumes to the main European markets – Spain and Italy - were dashed as these two countries were the hardest hit by the virus in that continent. In 2018-19, India had exported US$6.7 billion worth of seafood, of which squids and cuttlefish together accounted for about 10%.

Nevertheless, up till recently, the Marine Products Export Development Authority (MPEDA) maintained that in general, seafood exports from India had not been impacted in a major way, except for slowdowns in cargo transport, particularly to China. The situation however became less clear after the Indian government implemented the lockdown period. Fishing activities in some States came to a halt and shrimp exporters said that because of the lockdown, they had started to face difficulty in exporting to other countries.

In the Republic of the Maldives, non-canned tuna exporters are struggling with the fact that exports dropped by 30% in January 2020 as compared to the same month last year, reported the Maldives Seafood Processors and Exporters.
Association (MSPEA). Tuna is the only seafood product of international value from the country. The Association said that the exports have been affected by the widespread closures of restaurants and food courts in Europe.

The Philippines, subject to a lockdown from 17th March to 30th April, usually exports the bulk of their tuna by air through Manila, but this came to a halt with the cancellation of domestic and international flights. Worst affected has been General Santos city in Mindanao, which is used to exporting about five tonnes of fresh tuna every day to various countries in Asia, particularly Japan.

Vietnamese seafood exporters are resigned to the fact that their revenue will plunge for the first half of this year. They had hoped that once China recovered, exports could resume, but due to the spread of the virus worldwide, orders began to be cancelled in Europe, the Americas, the rest of Asia, and the Middle East as buyers in those countries could not move their stocks to domestic consumers.

The Vietnam Association of Seafood Exporters and Producers (VASEP) reported that pangasius exports plunged in the first two months of 2020, valued at US$210.3 million (EUR 197 million), which was 32.1% lower year-on-year. The volume exported to China dropped by 52% to US$28.4 million (EUR 26.3 million). Likewise, exports to the EU were down by 40% (US$26 million (EUR 24 million) and to the US by -27% at US$38.6 million (EUR 35.7 million) in the period under review.

Due to the significantly lower global demand, farm gate prices for pangasius had dropped to around US$0.7/kg at the end of March as compared to US$1.3/kg in March 2019.

With regard to shrimp, VASEP said that 35-50% of shrimp orders from the U.S. and EU were cancelled or postponed, and Chinese imports dropped by some 37%. However (and perhaps surprisingly) the overall decline in shrimp exports was counter balanced by increased demand (+16%) from Japan. Cold storages in Vietnam were reported to be full at the end of March and processors in Vietnam said that not only were their contracts being cancelled, they could not obtain enough raw material for the processing to continue. Nevertheless, VASEP sounded a positive note, predicting that global demand for seafood should recover by July and that shrimp farmers could begin stocking soon.

Customs trade statistics provide a useful overall view of Vietnamese seafood exports in the January-February period. According to the data, seafood exports earned US$988.8 million (EUR 915 million), down by nearly 11% compared to the same period in 2019. The leading destinations were Japan with US$184.7 million (+2.5% year-on-year), the US at US$179.5 million (+1%), and the EU at US$143.7 million (-11%) down 10.9% from January-February 2019. Those in the sector welcomed news in early March that the government had directed the State Bank of Vietnam and relevant agencies to provide a credit package of VND 250 trillion (US$10.7 billion) and a tax exemption scheme worth VND 30 trillion (US$1.3 billion) to support businesses affected by the pandemic. VASEP has also requested for a 50% cut in corporate income taxes for seafood companies, lower electricity rates for seafood processing plants and cold storage units, as well as support from banks.

According to the Myanmar Times, fisheries exports from Myanmar to China (its main market) have continued despite the coronavirus outbreak. About 4 000 tonnes of fisheries products, including pike, flounder, white pomfret, yellow pike conger, carp, pufferfish, prawns, and squid, were reported to have entered China through the Muse border gate between 1 to 8 March. These exports were worth US$3.12 million (EUR 2.8 million). In the same period, the Chin Shwe Haw border route saw 28.23 tonnes of fisheries products, comprising eel and pike conger shipped into China, valued at US$72 075. Reportedly, export activities via Chin Shwe Haw were suspended in February at the height of the Covid-19 outbreak in China.

Ministry of Commerce data states that between 1 October, 2019 - 28 February, 2020, Myanmar exported fisheries products worth US$415.3 million, an increase of nearly 15% from US$361.5 million in the same corresponding period.

Australian seafood prices are falling and fishers are pleading for help as major international markets have been affected due to the outbreak. Prices paid to fishermen for prawns, scallops and lobsters have dropped by a third and could slide further as Asian markets continue to hold off buying seafood. The lobster sector in particular remains badly affected by the closure of the Chinese market as producers and exporters had specifically targeted that market during its peak Lunar New Year sales period. In the meantime, seafood wholesalers in...

Credit: VASEP
Australia have launched a social media campaign in a bid to increase domestic seafood consumption.

The New Zealand lobster industry was particularly impacted as China is its only market of significance, absorbing some 98% of the supply in normal circumstances. Fisheries New Zealand has proposed that the annual catch entitlement (ACE) for lobster be carried forward by up to 10% of an individual’s total ACE holdings that may not have been acquired by the end of the fishing year; in other words, uncaught quota for 2020 could possibly be used in the following fishing season.

Europe (EU & non-EU)

In Europe, there is strong demand for frozen and shelf-stable seafood rather than fresh. In general, most of the countries have enough stocks in storage for a couple of months but after that, there may be a problem with declining supplies of raw materials.

In its week 12 & 13 Bulletin covering the Covid-19 crisis, the EU Market Observatory for Fisheries and Aquaculture Products (EUMOFA) said that for EU fisheries, the closure of HORECA channels, and in some places the closure of open markets, led to significant impacts on their activities, especially for small scale fisheries selling fresh fish (sharp drops in terms of volumes and prices). The result was that many vessels stayed at ports and some auctions had to close. In some Member States (MS) such as France, the sector put in place temporary solutions (distance selling, vessel rotation, stopping targeting species for which the demand collapsed, etc.) to minimise impacts on the market, especially to maintain reasonable prices. Many French vessels went out fishing only after having guaranteed contracts with wholesalers or retailers.

After a first chaotic week on the market (week 12) the situation in week 13 showed some positive signs in some MS at first sales level. However, volumes were still significantly low. In week 13, import volumes of fishery products into the EU were down by 32% compared to the previous week and 39% year on year, particularly for Norwegian Atlantic salmon (-65%), Norwegian cod (-14%), Gilthead seabream and European seabass from Turkey (-8% and -6% respectively) and haddock from Norway (-5%). Species which are traditionally imported in small volumes for restaurants showed the sharpest decreases from week 11 compared to week 13: Atlantic halibut from Norway (from 33.6 tonnes to five tonnes), Norwegian turbot (3.8 tonnes vs 15 kg), and yellowfin tuna from the Maldives (16.2 tonnes vs 0.2 tonnes).

EUMOFA predicted that in general, the processing industry relying on frozen imports from third countries could experience a shortage in supply in the coming months as processing activities are reduced, there are limitations in freight capacity and some major supplying countries have closed their ports.

At the end of March in Norway, the Norwegian Seafood Council (NSC) observed that many markets were reporting increased demand for processed and prepacked seafood, as well as products with longer sell-by dates, such as clipfish and frozen fish. Furthermore, the transport bans and disruptions which were starting to bite in the US and Europe made it difficult to ship fresh salmon to the traditional destinations, even though prices had softened considerably by then. The industry accordingly quickly adapted to these shifts in buyers’ preferences and started producing more processed products. Said Paul Aandahl, seafood analyst at the NSC, “whilst the export of fresh whole salmon to the EU has fallen by 6% in week 12, we see growth of 16 and 63% respectively to Poland and Lithuania. These are markets where Norwegian salmon are processed and smoked before being sold to European markets.”

Aandahl continued “Despite a sharp decline in the sales of Norwegian salmon to the restaurant segment in Asia, the total volumes of fresh whole salmon to Asia were almost the same as last year. This is primarily because of strong growth in the take-away segment and increased sales in retail. China had a decline of 17% compared with last year, however in South Korea exports have grown by 53%. To the US market, where transport capacity for fresh salmon was severely affected in week 12, fresh Norwegian salmon exports fell by 89%, whilst fresh fillet exports remained at the same level.”

In an early April update on fresh Norwegian salmon exports, the NSC reported that Easter sales had begun to pick up, and in fact had exceeded expectations to European markets such as the UK, Sweden and Finland.

Fresh salmon exports from Norway are down, particularly to the US, Europe and China, but overall, volumes were not as badly affected as had been feared.

The demand for Scottish shellfish (crab, langoustine) has been badly affected with the closures of hotels and restaurants, as well as social distancing rules, in the UK and elsewhere. Many small businesses have simply had to cease operations for now.
**Situation Report**

**North America**

On 25th March, the United States Senate voted to approve a US$1.2 trillion economic stimulus package that included some US$300 million to assist tribal nations, fishermen, fishing communities, other fishery-related business and certain aquaculture businesses until 30 September 2021. This is part of the US$2 trillion relief package approved for American businesses and individuals affected by the pandemic. Undercurrent News reported that the US will remove 25% tariffs on imports of tilapia and red swimming crab from China. Meanwhile, to boost sales of pangasius, the US Department of Agriculture said it would temporarily relax a labeling requirement to allow fish that was originally packaged in large blocks for foodservice to be repackaged for retail sale.

In Canada, seafood groups such as the Canadian Aquaculture Industry Alliance have requested an aid package of CAD 82 billion (US$58.2bn). One positive bit of news is that live lobster exports (67 tonnes) from Nova Scotia to China (the primary market for the product) resumed in the first week of March, with the industry in Canada staying in a wait-and-watch mode to see if the distribution system in China had sufficiently recovered.

**South America**

According to the Committee on Fisheries and Aquaculture of the National Society of Industries (SNI), Peruvian shipments of seafood products to China and other destinations that make stopovers in Chinese ports have been put on hold (as at end-March) until the situation in China normalises. These products include canned anchovies, canned tuna, frozen cuttlefish, frozen shrimp tails and horse mackerel.

Fresh seafood exports (snapper, yellowtail, grouper) from Brazil to the US remain suspended due to the sudden lack of demand from that market.

Chilean fresh salmon exports to its major markets US, Brazil, and SE Asia have continued; sales to China, its fifth largest market for the product, were suspended at the beginning of March, but SalmonChile said that shipments had begun to resume slowly by the end of that month.

Ecuador, as mentioned earlier, is keeping watch on the situation to ascertain when shrimp exports can resume China, before the outbreak of Covid-19, was the top market for their product, and so the closure had a huge impact on sales from Ecuador. However by the end of March, signs of recovery in China were noted. With regard to Europe, José Antonio Camposano, Executive President of the National Aquaculture Chamber (CNA), said that Italy normally takes about 30% of Ecuadorian shrimp supplies; unfortunately demand has dropped as it is one of the European countries most badly affected by the virus. In 2019, Ecuadorian shrimp exports to Italy were worth US$176 million, according to figures from the Central Bank.

**Other countries**

Of the countries which do not fit neatly into the regions mentioned above, arguably the most important is Russia, which spans both the European and Asian continents. The Federation of Seafood Businesses (Sjømatbedriftene) called upon the government to negotiate with Moscow on lifting the current ban on salmon flights over Russia during the pandemic so that salmon exports to markets such as Japan, South Korea, and also increasingly to China, can resume.

Sales of products such as king crab, which are exported both by air to world markets as well as (in the case of China, by land), have also been affected. According to the Russian Association of the Far Eastern Crab Catchers (AFCCE), live king crab exports to China dropped to almost nothing in March, and exporters diverted more supplies to South Korea, which usually accounts for more than 60% of total Russian crab exports. At the end of March, German Zverev, President of the All-Russian Association of Fisheries Enterprises, Entrepreneurs and Exporters (WARPE), said that the export price of crab had dropped from US$15-18 dollars to seven dollars per kg. WARPE estimates that exports for the first quarter of 2020 may drop to 7-8 thousand tonnes, and revenue will be around US$60–70 million dollars (about half the anticipated amount).

**Canned seafood sales deserve a special mention**

Global manufacturers of canned seafood, particularly tuna, have seen their sales shoot up as consumers from the Americas through Europe and Asia bought food in bulk in anticipation of lockdowns and possible shortages. In hard-hit Italy, various news wires reported that canned tuna was the second most widely-purchased product in February, next only to canned meat.

In the US, CNBC reported that in the week ending 21st March, sales of fresh meat increased by 100%, canned tuna by 200%, and dried beans by 400% as compared to the same period in 2019. In Asia, according to Bloomberg, Thai Union is now one of the best performers among consumer stocks in Asia (excluding Japan) with a market value of at least US$1 billion. The company is the maker of (among others), ‘Chicken of the Sea’ in the US, and ‘John West’ in Europe. Other major canned tuna and sardine manufacturers such as the Bolton Group (Italy) also reported increased sales.

*Credit: CNA*
LATIN AMERICA: THE RESHAPING OF THE TUNA LANDSCAPE AFTER COVID-19

By late March 2020, the Covid-19 virus had arrived in full strength across Latin America. In economic terms, the region was already growing very slowly, at less than 1% a year on average; thus the impact of the virus will be profound, affecting many areas such as commodity exports, which will be met with lower prices. It will also affect the tourism industry, reduce remittances by foreign workers, cause shutdowns of service businesses and cut down exports due to the contraction of their biggest export market, China. The UN estimates that the number of poor in Latin America, out of a total of 650m, will soon rise from 185m to 220m. Adding say, another 35 million poor people to the already impoverished region will put huge pressure on many populist governments that were elected claiming the usual mantra of “we care for the poor”.

In political and social terms, Latin America has been suffering major discontent and despair, and has seen many protests especially in Chile, Ecuador and Venezuela. Moreover, the election of two very different populist governments in Brazil and Mexico, right and left-oriented respectively, together with the return of the Peronists in Argentina, have shaken the foundations of the strong middle classes in those countries, which are the three biggest economies in Latin America. Despite having chosen these leaders democratically, there is a fear now that there are fewer opportunities for progress and no clear horizons ahead. It is obvious that Covid-19 will significantly alter the paths of global economies including Latin America, unless governments act with responsibility, common sense and transparency to avoid a major disaster.

This brings us to the subject of this paper: Will the virus reshape the tuna landscape in Latin America? And if so, how?

In order to find the answers to this, we will first look at “The day after”. In other words, assuming one day the virus will eventually disappear, or a vaccine is developed, we must list all potential changes that may affect the region, especially those related to food production and consumption. After we have identified all this, we will be in a position to narrow our search and analysis down to our favourite fish: tuna.

What will happen “the “day after”?"

Perhaps one of the few certainties we have in these turbulent times is that one day this crisis will be over. To understand the implications of how Covid-19 will affect us, we can divide them into two groups: global ones, and those specific for Latin America, as follows:
**Global implications**

- **Globalisation**: pulling back, lessons learnt from protectionism applied by some countries
- **US-China**: quest for global dominance to continue, fueled by President Trump’s re-election campaign
- **Protectionism**: tariff wars are expected to revive economies. Closing of borders as a tool.
- **Dependence on China**: risks with China as main business partner and top foreign investor
- **Supply Chains**: integration vs disintegration: diversification as solution?
- **Regionalism and globalism**: turning inward, readapting supply chains to deal with potential disruptions
- **Global value chains**: “Just-in-time” is no longer an advantage, financial and operation costs will mostly increase.
- **Resilience** as the “New Normal”
  1. Diversifying suppliers may become the norm in multinationals to reduce dependency; and to avoid “the unexpected” (wars, epidemics, earthquakes, tsunamis, etc)
  2. Diversifying origins as protection against changes in the rules of the game
  3. Zero stocks: no longer a good policy in some industries
- **Factories abroad vs local manufacturing**: robotisation (they don’t catch virus!) as a solution to reduce costs and dependency on the human factor
- **Commercial integration**: “unheard of” countries may become interesting for business.

**Opinion**: This is an opportunity for the region to form a more socially responsible society, caring for the needy, and giving equal access to health and education, both for rich and poor.

**Implications for Latin America**

- **Recession** for a long period inevitably will change consumption patterns and habits
- **Lockdowns** will accelerate changes
  1. Home office: homes become more efficient for remote work
  2. Eating habits at home will change: family meals, health, convenience
  3. On-the-go eating: HORECA business will have to adapt to the new reality
  4. On-line shopping vs decrease in scale and frequency of purchases by retailers
- **Movement**: less travel, less use of cars, less use of public transport, less traffic jams. In other words, lower global oil consumption
- **Foreign workers**: more controls at borders, less regional circulation
- **Poverty**: purchasing power eroded leading to the rise of cheaper brands and private labels
- **Taxes**: helping the lower income groups by increased taxing of the middle and higher income groups
- **Traceability**: consumers will demand information which they feel is trustworthy in their brands and favourite foods
- **Organic foods**: as the synonym of safety and commitment to good practices by companies
- **Stocking up**: canned foods with a longer shelf life to prepare for future crises
- **Sustainability** can be the new flag that Latinos have neglected for years
- **Rejection of populism**: parties that have succeeded in controlling the spread/duration of the Covid 19 virus will be remembered in future elections as being successful and caring

**Supply and demand trends**

How can we now predict the factors, countries and trends that will reshape the tuna landscape in Latin America? To do this, we have to assume that the coronavirus effects will last during most of 2020 (i.e. it will continue to impact significantly on our lives), and also that no country in Latin America will be immune.

For that purpose, Economics 101 teaches us that we must first understand that there are two sides of the equation: supply and demand. It is useful then to separate Latin America into two categories: tuna producing/exporting countries from the non-producing/importing ones (Table 1). Then, we will be able to study and better grasp the demand side, i.e the consumers.
Although there is a common language (Spanish) uniting all 33 countries (except for Brazil, where they speak Portuguese), there are significant differences in their eating and purchasing habits. Tuna is no exception, as Latin American consumers have various ways of consuming it at different occasions, and even according to the time of the year (Lent and Easter). However, for the purpose of our study, we can separate them into heavy and light users (Table 2). A common way of doing this is using 1kg a year per capita as the benchmark, which is approximately six cans per person per year, as follows:

Table 2: Main consuming countries

<table>
<thead>
<tr>
<th>Tuna in Latin America</th>
<th>Heavy users (more than 1kg/year/person)</th>
<th>Light users (less than 1kg/year/person)</th>
</tr>
</thead>
<tbody>
<tr>
<td>South America</td>
<td>Equador, Chile, Venezuela (pre-crisis)</td>
<td>Brazil, Uruguay, Bolivia, Uruguay, Guyana, Suriname, Paraguay, Colombia</td>
</tr>
<tr>
<td>Central America &amp; Caribbean</td>
<td>Mexico, Costa Rica, El Salvador, Guatemala</td>
<td>Nicaragua, Guatemala, Honduras, Belize, Cuba, Rest of the Caribbean</td>
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</table>

Now that we have divided the Latin American countries into clusters of producers vis-à-vis consumers as in Tables 1 and 2, by looking at the predicted impact of Covid-19, we can infer which of these countries may eventually “benefit” from the unfolding situation. On the supply side, we can select among the factors which can bring out an increase in tuna intake through time, and those causing consumers to acquire new habits and uses. On the downside, a possible move to cheaper, lower quality tuna may occur. We then identify the countries that have more to “gain” from the virus crisis (Table 3b).

Table 3a: Post-virus effects on tuna suppliers/producers

<table>
<thead>
<tr>
<th>Factors</th>
<th>Upside</th>
<th>Downside</th>
<th>Suppliers/producers (most affected)</th>
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<tbody>
<tr>
<td>Recession in 2020 (GDP)</td>
<td>Ecuador, Brazil, Mexico</td>
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<tr>
<td>Regionalism: economic blocs may lose relevance</td>
<td>Brazil/Mercosur, Peru/Pacific Alliance, Mexico/NAFTA</td>
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<tr>
<td>Global value chains: disruption affects trade and increases costs</td>
<td>El Salvador, Guatemala, Colombia; Ecuador, factories owned by multinationals</td>
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<tr>
<td>Diversification of suppliers/origins</td>
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<td>China: reduced dependence</td>
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<tr>
<td>Tariffs/protectionism</td>
<td>Brazil, Costa Rica, Colombia</td>
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<tr>
<td>Non-tariff barriers</td>
<td>Ecuador, Brazil</td>
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<td>Robotisation of factories</td>
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<tr>
<td>Oil prices: historic low</td>
<td>Good for fishing fleets; Bad for economy (Ecuador)</td>
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Table 3b: Post-virus effects on tuna demand/consumers

<table>
<thead>
<tr>
<th>Factors</th>
<th>Upside</th>
<th>Downside</th>
<th>Potential effect</th>
<th>Countries to lose/gain the most</th>
</tr>
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<tbody>
<tr>
<td>Recession affecting consumption</td>
<td>Trading down of tuna</td>
<td>All countries</td>
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<tr>
<td>Lockdown effect: more meals at home</td>
<td>Increase in consumption per capita</td>
<td>Brazil, Peru, Argentina</td>
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<tr>
<td>Home office (remote work)</td>
<td>Convenience products: ready to eat salads/snacks/packs</td>
<td>Brazil, Colombia, Argentina</td>
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<tr>
<td>Online shopping</td>
<td>Rise in retail sales/HORECA decrease</td>
<td>Brazil, Peru, Colombia, Argentina</td>
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<tr>
<td>Products with longer shelf life (e.g. canned food)</td>
<td>Increased sales, more multipacks options</td>
<td>Brazil, Peru, Colombia, Argentina</td>
<td></td>
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<tr>
<td>Increased demand for food which is traceable/“safe”</td>
<td>Trading up of tuna</td>
<td>Brazil, Colombia</td>
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<tr>
<td>Perceptions healthier food</td>
<td>Trading up of tuna</td>
<td>Brazil, Colombia</td>
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<tr>
<td>Sustainability as flagship for top brands</td>
<td>Trading up of tuna</td>
<td>Brazil, Colombia</td>
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<tr>
<td>Decreased purchasing power for middle income classes</td>
<td>Decrease in solid tuna/increase in flake/chunk tuna options</td>
<td>Mexico, Brazil, Colombia, Argentina</td>
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</table>

Opinion: Ecuador is facing a “perfect storm”- among all the tuna producers, it will be the hardest hit country by Covid-19 in the Latin American region.
Conclusions and recommendations

a. The coronavirus will severely impact Latin American society, economy and politics (relatively more than Europe and Asia) throughout 2020, and probably into 2021.

b. The virus will oblige the region to revise and implement deep changes in the health system, in order to minimise risks to the population, at least until a vaccine is developed.

c. Commerce, manufacturing, and especially regional trade will suffer too, as consumption, investments and exports are projected to decrease significantly.

d. The impact of the virus will be seen across the whole value chain, forcing companies to review their financial projections, supply contracts, just-in-time methods, business models, distribution policies, production practices etc.

e. At-home food and beverage consumption as a result of lockdowns and quarantines implemented will rise. E-commerce in general and online retail ordering will also grow, but in turn this will cause a big decline in foodservice/ HORECA/tourism sales.

f. Tuna has been the star in many countries in Europe during the tough months of lockdowns and closures. The fact that it’s reliable, safe, tasty, has a long shelf life and traceable makes it a unique item.

g. Stocking up on canned tuna has surprised many factories which were not prepared to keep up with the sudden demand. This change in habit may be temporary, but it clearly means that deeper category penetration is inevitable, even in countries with already high consumption per capita.

h. In Latin America, similar trends (as listed in e, f, and g above) have been observed. The demand was so big that wherever canned tuna was not available or sold out, sardines and mackerel were purchased as alternatives.

i. Paradoxically, many of the negative effects of Covid-19 on the tuna industry will be offset by positive ones.

j. Unfortunately a “perfect storm” is brewing for tuna giant Ecuador: oil prices are down, health system is unprepared, and the low popularity of the government means a severe recession is expected. Tuna production and exports will suffer as a consequence.

k. Countries with low per capita tuna consumption (2-4 cans per person a year) that will be positively impacted in the future: Brazil, Colombia, Peru (all in the medium term) and Argentina (long term).

We can conclude that the tuna landscape in Latin America has already been reshaped due to the coronavirus, and that its effects on production and consumption will last for many years to come.

As a recommendation for Latin American governments, it is highly advisable to provide a safety net for the lower/middle income classes to avoid collapse in the economy. Opening up economies, eliminating intra-bloc barriers, and reducing import tariffs on food (including tuna) is a way to help these classes by maintaining a lower inflation level.

As a recommendation for Latin America tuna companies and the tuna industry in general, be prepared to meet the new post-virus trends. Grab the opportunity to make your tuna range more appealing and help increase consumption per capita in those countries that have neglected tuna protein vs beef/chicken/pork.
Ensuring food safety in the seafood sector

According to the U.S. Food and Drug Administration (USFDA), there is no evidence suggesting that food products and food packaging are associated with transmission and spread of Covid-19. The European Food Safety Authority (EFSA) also confirms that there is no evidence that food is the source or transmission route of the coronavirus. Nevertheless, seafood processors should develop infectious disease preparedness and response plans that will enable them to take preventive measures against diseases like Covid-19.

This should be done throughout the seafood supply chain, which stretches from harvesting (fishing vessels/farms), through landing, processing, distribution, retail and food services, and consumers. Personal hygiene and handwashing is mandatory under HACCP guidelines at every stage, more so during a pandemic. Meanwhile, HACCP, cGMP and ISO 22000 certifications generally ensure the basic fitness of workers and food safety protocols in factories, while re-evaluation of ongoing food safety programmes that address personal hygiene and respiratory etiquette is necessary to prevent Covid-19 transmission which can cause increased rate of workers’ absenteeism; change in business patterns; and interrupted supply/delivery.

Preventive measures to ensure safe workplaces

Seafood processors should develop the following:

i. **A Preparedness and Response Plan** to prevent infectious diseases like Covid-19 if one does not already exist. The Plan should consider and address the level of risk linked with the workplaces. It may include where, how, and to what sources they might be exposed, the home and community situation, individual health risks and controls necessary to address the risk;

ii. **Implement basic infection preventive measures.** As appropriate, all seafood processors should implement good hygiene and infection control practices. It includes frequent and thorough hand washing, encourage employees to stay at home if they are sick, be aware about respiratory etiquette, provide customers and the public with tissues and trash receptacles, flexible worksites and workhours, discourage use of shared work tools and equipment and maintain regular housekeeping practices strictly;

iii. **Identify and isolate sick people promptly.** Identification and isolation of potentially infected individuals is a critical step, after which they should be encouraged to self-monitor for symptoms of the disease;

iv. **Implement and communicate about factory protection protocols.** This includes actively encouraging sick employees (including temporary staff) to stay at home, and provide adequate, usable and appropriate training on workers’ health and safety including proper hygiene practices including PPE;

v. **Implement engineering and administrative factory controls.** Engineering controls involve isolating employees from work-related hazards. Administrative controls are changes in work policy or procedures to reduce or minimise exposure to hazard;

vi. **Safe work practices.** This involves providing resources and a work environment that promotes personal hygiene, requiring regular handwashing or using alcohol-based hand sanitisers, and post hand washing signs in restrooms.

Maintaining a high level of personal hygiene includes keeping the hands and nails clean, nails short and free of nail varnish and not using excessive perfume. Handwashing is important in the following cases:

- After handling raw product
- After coughing, sneezing or using a handkerchief
- If you were in contact with someone who has a fever or respiratory symptoms (cough, shortness of breath, difficulty breathing)
- After using tobacco, vaping, eating or drinking
- After touching face or hair
- After handling waste
- After using the toilet facilities
- After handling soiled equipments and utensils
- Before and after preparing food
- When changing from one task to another

These next two pages of the Situation Report contain an overview of the recommended infectious diseases preventive measures for food providers and processors.
Respiratory etiquette:

- Maintain 1 metre distance between yourself and anyone who is coughing or sneezing
- Avoid touching mouth, nose and eyes
- Cover nose and mouth with a tissue when sneezing or coughing
- Put used tissue in a covered bin
- If no tissue is available use flexed elbow instead of hands while sneezing or coughing

vii. Ensure Personal Protection Equipments (PPE). All types of PPE must be available and selected to suit the potential hazard, be properly fitted and periodically refitted as applicable (e.g. respirators). Also to be consistently and properly worn when required, regularly inspected, maintained and replaced as necessary and properly removed, cleaned, and stored or disposed of to avoid contamination.

viii. Restrict employees going abroad or on international tours. During the infectious disease outbreak, travel into or out of a country may not be medically advisable.

Some takeaway points

- Fishing vessel and farm owners should follow the quarantine and biosecurity measures respectively during an infectious disease outbreak, to continue their production;
- Processors network with a lot of people, and are thus in the position to ensure that they practise handwashing and personal hygiene by themselves and encourage others;
- There should be strong coordination between the production and distribution stages in order to manage the inventory/SKU successfully without shortfalls or excessive supply;
- Retailers and wholesalers should be aware about the guidelines provided by the regulatory authorities during an infectious disease outbreak so that they can inform the consumers accordingly;
- Seafood processors, distributors, retailers, and food service and allied industries can carry on their business while maintaining social distance, and taking necessary precautions for community continuity and community resilience;
- At every step of seafood handling, cooking and preparation, consumers should follow the guidelines to keep food safe and prevent foodborne illness: Clean- Wash hands and surfaces often, Separate- Separate raw meat from other foods; Cook- Cook to the right temperature, Chill- Refrigerate food promptly;
- Restaurants and supermarkets can offer special discounts for online orders and home deliveries;
- It is safe to eat fish & shellfish cooked at a minimum internal temperature of 145°F (62.8°C);
- For packet or canned seafood use a “sterile technique” before stocking in your house;
- There should be global and regional monitoring of fake news in social media propagated against seafood in other media.

Conclusion

Handwashing, personal hygiene, social distancing, identifying persons who may be affected, and testing can prevent human-to-human transmission of infectious diseases like Covid-19. Nevertheless, these measures are actually short term remedies. Greater emphasis should be given to increasing supplier diversity, formulating a contingency plan for production, having an expanded emergency plan; and long-term risk assessments and awareness programmes. Moreover, a comprehensive ICT-based platform can be set up for the exchange of marketing and distribution information, as well as implementation of an Electronic Catch Documentation Scheme (eCDS) to minimise the huge losses in the seafood sector and to ensure food safety as well.

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2. http://www.bim.ie/media/bim/content/downloads/Hygiene,Requirements,when,handling,Seafood.pdf
6. https://www.fda.gov/media/136142/download
How is COVID-19 affecting the fisheries and aquaculture food systems

A SECTOR AT RISK, YET FISH IS SAFE TO EAT

The COVID-19 pandemic has triggered a public health crisis followed by an on-going economic crisis due to the measures taken by countries to contain the rate of infection, such as home confinement, travel bans and business closures, among others. Even though food retail businesses, like supermarkets, grocery and convenience stores and take-away restaurants are deemed essential and remain operational, the measures taken to contain the COVID-19 outbreak have created an environment in which food could become more difficult to obtain.

Although COVID-19 does not affect fish, the fish sector is still subject to indirect impacts of the pandemic through changing consumer demands, market access or logistical problems related to transportation and border restrictions. This will in turn have a damaging effect on fishers and fish farmers’ livelihoods, as well as on food security and nutrition for populations that rely heavily on fish for animal protein and essential micronutrients.

At the same time, misleading perceptions in some countries have also led to a decreased consumption of seafood, resulting in a fall in prices of fish products. This emphasizes the need for clear communications regarding how the virus is transmitted and that it is not related to seafood.

PROTECTING EACH STAGE OF THE FISHERIES AND AQUACULTURE SUPPLY CHAIN

The full range of activities required to deliver fish and fishery products from production to the final consumer are complex. Globally, technologies employed vary from artisanal to highly industrial. Value chains include local, regional and global markets. Key activities in a fisheries or aquaculture supply chain are fishing, aquaculture production, processing, transport, and wholesale and retail marketing. Each link in the chain is susceptible to being disrupted or stopped by impacts arising from COVID-19. If one of these producer–buyer–seller links is broken by the disease or containment measures, the outcome will be a cascading chain of disruptions that will affect the sector’s economy. The desired result, human consumption of fish and fishery products, can only be achieved by protecting the producer–buyer–seller links and each stage of the supply chain. Therefore, it is essential that each stage of the fisheries and aquaculture food chain be given all possible protection.

1. Fishing activity reduced or brought to a halt because of drop in demand and/or prices

There is already evidence of a reduction in fishing effort in parts of Africa, Asia and Europe for a number of reasons. For example, fleets that rely extensively on export markets (e.g. the United Kingdom of Great Britain and Northern Ireland and Ireland) and on higher value species (e.g. 
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lobsters) are likely to be particularly impacted. Sanitary measures (physical distancing between crew members at sea, facial masks, etc.) can also make fishing difficult and can cause a cessation or reduction of activity. Limited supplies (e.g. ice, gear, bait) due to suppliers being closed or unable to provide inputs on credit, also constrain fishing activities. Labour shortage is another problem as some crews consist of migrant workers who may not be able to cross country borders at present. In addition, the uneven availability of equipment to ensure health security for crews, the responsibilities of shipowners in the event activity resumes, the crew’s eligibility for aid such as partial unemployment, temporary closures, the availability of support systems to maintain the primary activity, and compatibility between the various (economic and other) support mechanisms can all affect the current level of fishing.

Measures to protect production and income include:

• designating, where this is not already the case, fishers and crew members as “essential workers” as they provide food to the nation;
• expediting visas for temporary, seasonal and foreign labour to harvest seafood;
• linking fishing centres or villages to such services as the local community kitchen in the area, where smaller varieties of fish (sardines, mackerels, anchovies) can easily be fried and be supplied there for a fixed price, where possible;
• expanding governments’ purchase of seafood for institutional use (prisons, hospitals, school feeding programmes, etc.) as well as for distribution as food assistance;
• extending the fishing season to compensate for economic losses;
• providing compensation to the owners and crew of vessels prevented from fishing;
• restricting the level of fishing currently undertaken (by setting up a collective and transparent quota or lottery system, for example) to match current demand, while ensuring that local food security is not negatively affected; and
• having government departments set a minimum floor price for each of the important species of fish, where possible.

2. Varied impacts in aquaculture production with uncertainties for the future

Effects on aquaculture production will vary. Due to market disruptions, fish farmers cannot sell their harvest and they must keep large quantities of live fish that need to be fed for an indeterminate period. This increases costs, expenditures and risks. Some farmed species for export (e.g. pangasius) have been reportedly affected by the closure of international markets (China, European Union). Shellfish aquaculture (e.g. oysters) are affected mainly because of the closure of foodservices (e.g. tourism, hotels and restaurants) and retailers (e.g. European Union). In addition, due to a wide range of restrictions by different countries on cargo movements and airport clearing, etc., hatchery operators and brood stock traders may find it difficult to trade brood stock for seed production, which could cause a sharp decline in production. Small-scale aquaculture, on the other hand, may benefit from reduced competition with fish imports. Aquaculture production capacity may also be affected by the difficulty in sourcing inputs (seed and feed) and finding labour due to lockdowns.

1 http://www.rfi.fr/es/europa/20200330-el-mercado-de-pescado-fresco-se-derrumba-en-europa-por-el-coronavirus
2 https://elpais.com/economia/2020-03-26/los-pescadores-recogen-sus-redes.html
3 Information from the Comité national des péchés maritimes et des élevages marins (CNMEM) as at 28 March 2020 (https://www.comite-peches.fr/la-peche-française-dans-le-brouillard/).
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Measures to maintain operations include:

- declaring aquaculture to be at par with agriculture for the purpose of priority sector lending, crop insurance, power tariff and other levies;
- increasing access for fish farmers to credit and micro-finance programmes with reduced interest rates, flexible loan repayment, and options for restructuring loans and related payment schedules;
- granting programmes to cover production and income losses to maintain domestic seafood supply chains and to ensure continued operations;
- forgiving loans used to maintain payroll, and low-interest loans to refinance existing debt;
- relieving payments, i.e. suspending certain financial obligations such as utilities, real estate tax and mortgages; and
- slowing down production where there is a drop in demand or reduced market access, especially if exports remain slow and farm labour has been lost.

3. Processors, markets and trades are adapting to shift in demand

The fish and fishery products sector is particularly reliant on the food service sectors, and thus is highly affected by changes in food services. As countries implement lockdown measures, restaurants, hotels, schools, universities and associated canteens close down, causing a drop in activity for many fish wholesalers and an absence of outlets for some high value fresh fish species. Panic buying of food has reportedly benefited the sale of prepacked, frozen or canned fish and fish products, but these may not be able to continue supplying the market if the raw material is not available, and because of other logistical problems. In particular, as countries are closing down their borders, there may be delays at border crossing and air flights may be cancelled, which may affect the trade of goods, and the cost of transport can increase significantly. Restrictions on market access and a drop in demand will mean fish and fish products may be held in storage for longer. This has implications for food loss and waste due to quality changes as well as additional costs for processors, exporters, importers and traders. At the same time, this unprecedented situation is generating promising innovative practices that could influence the way the sector works in the future.

Measures to support the supply chain include:

- in the area of international trade, in a joint effort to ensure that trade flows continue to be as free as possible, a call by the heads of FAO, the World Trade Organization (WTO) and the World Health Organization (WHO) for the prevention of border restrictions on trade in food to avoid food shortages, emphasizing that the dissemination of information on food-related trade measures is fundamental;\(^5\)
- ensuring supply chain access, and, for those fishing operations that sell their products overseas, ensuring continued access to and cooperation from officials at ports, rail and border crossings so they can maintain their sales;
- ensuring the stability of fisheries access by reducing unnecessary regulatory burdens that are preventing access to and sustainable harvest from fishing grounds;

\(^5\) The full report is available at https://www.wto.org/english/news_e/news20_e/igo_26mar20_e.htm
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- continuing support for the supply chain (e.g. using temporary storage of fish, diverting fish to the home market, working with processors to adjust supply to the home market and replacing product previously prepared for the export market);
- processing fish that remains unsold (e.g. salted or stored in ice as appropriate, which requires a supply of medium-sized insulated fish boxes to be provided by the relevant government departments;
- exploring the possibility of freezing fish productions with fish processing, refrigerating and distribution companies;
- marketing directly to end consumers as a potential important new approach for some businesses; and
- using alternative marketing strategies to help alleviate the need for prolonged storage.

4. Problems of working conditions along the value chain

The working conditions and safety of fishers at sea will be affected should the number of fishers available to crew vessels be reduced. Crew on large-scale industrial vessels (pelagic trawlers, purse seiners) that are working on/off for several weeks and are then replaced while they have a break, are unable to travel home due to flight restrictions and quarantine periods. Consequently, they may have to work longer periods on board, which increases fatigue, stress (also about the health of family members at home), and potentially the chances of on-board accidents. Large-scale fishing vessels of distant water fishing fleets can also be confronted with COVID-19 cases among their crew members while far out at sea. The virus may spread rapidly among all crew of a vessel and medical assistance is unlikely to be readily available. When trying to enter a port, crew that are not from the port State may not be allowed to enter the country. In addition, many crew members, just like small-scale fish farmers, are considered self-employed and do not currently qualify for unemployment or paid leave.

Given the migratory behaviour of many fishers, plus the frequent international visitors to fishing communities (e.g. cross-border movements), there is potential for fishing communities to become “hotspots” for the rapid spread of the virus. Restrictions on mobility may impact the harvesting sector by preventing the fishers from conducting their activities, and also the post-harvesting sector, where women are mostly in charge of the processing activities and trade. In case the restriction measures are not yet applied to markets, women fish vendors can be exposed to a greater risk for infection since markets see large numbers of people and physical distancing is difficult to implement consistently. This is even more likely if there is a lack of sanitation and hygiene facilities. The wide informality in the sector constitutes an added barrier for fishers and fish farmers to access protection from labour market policies and contributory social protection mechanisms. These might exacerbate the secondary effects of COVID-19, including poverty and hunger.

**Measures to protect the most vulnerable include:**

- ensuring safety by permitting only vessels with a full complement of crew to leave harbour to conduct fishing operations;
- improving hygiene and sanitation in the fish market during the relief/recovery period;
- providing payroll and unemployment assistance for crew members and self-employed small-scale fish farmers;

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¹ The number of available crew could be reduced owing to *inter alia* contracting the virus, restrictions on movements or lockdowns.
• supporting the most vulnerable with cash and in-kind transfers by local institutions (where no national social protection schemes exist);
• adapting the programme design (delivery schedule, level of benefits) and relaxing conditionalities (e.g. waivers on contributions) to ensure wider and adequate coverage of the fisheries and aquaculture sector, including informal workers, where social assistance (cash and in-kind transfers) or social insurance programmes exist; and
• supporting inter-institutional coordination, through data information exchanges between authorities responsible for fisheries development and governance to ensure the coverage of fishers by social development and repatriation.

5. Management and policy implications

While closing fishing operations will offer respite to some overexploited fish populations, similar constraints apply to the science and management of support operations. For example, fish assessment surveys may be reduced or postponed, obligatory fisheries observing programmes may be temporarily suspended, and postponing science and management meetings will delay both the implementation of some necessary measures and the monitoring of management measures. The collapse of exports markets has increased the possibility of re-sourcing fish from local producers. However, the national market of some nations is small or non-existent, and the national fishing fleet may exceed the capacity for the national market, with several management implications. Lockdowns could lead to a reduced capacity in Fisheries Monitoring Centres (FMC) as was the case in West Africa during the 2013–2016 Ebola outbreak, where staff were not only unavailable, but limited national resources were directed to funding emergency activities which left FMCs unable to function effectively. Fishers who are “safely at sea” in their microcosm know this and may keep operating or adapt their operations to benefit from the Monitoring, Control and Surveillance’s shortcomings to engage in illicit activities. A lack of monitoring and enforcement of shared stocks may encourage some States fishing on these stocks to revert to a less responsible level of managing, monitoring and controlling fishing operations.

Measures include:

• enhancing, where possible, remote surveillance and non-observer monitoring programmes (cameras, log-books, electronic reporting systems);
• maintaining levels of monitoring, control and surveillance of fishing activities to ensure that control measures are enforced and that the risk on board fishing vessels, particularly illegal, unreported and unregulated fishing activities, does not increase; and
• having governments carry out assessments and identify specific solutions in partnership with the actors from the sector.

Supply chain disruptions due to COVID-19

A short article entitled “The Impacts of COVID-19 on Loss and Waste in Fish Value Chains” can be viewed on the Food Loss and Waste in Fish Value Chains website [http://www.fao.org/flw-in-fish-value-chains/en/](http://www.fao.org/flw-in-fish-value-chains/en/) which was launched in mid-2019 by the Fish Products, Trade, and Marketing Branch (FIAM) of the FAO. The website was developed in response to a decision taken at the 32nd session of the Committee on Fisheries (COFI). It also publishes a bimonthly newsletter which highlights a different fish loss and waste topic each time. Anyone interested can register online to receive the newsletter. FAO also invites readers to take part in a short survey [https://www.surveymonkey.com/r/BTD2KH9](https://www.surveymonkey.com/r/BTD2KH9) to ensure that the website is still offering an informative experience.