

APPENDIX C: COVID-19 IMPACTS DISCUSSION

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Key Messages

- All ice services have been able to maintain essential services throughout the pandemic.
- All services are using work-at-home to a significant extent. Access to offices is generally restricted to essential personnel. For those activities that must be done in the office, physical distancing measures are employed including using separate offices and establishing traffic patterns to maintain 2 metre separation.
- Some services have recruited and trained additional personnel to fill in for staff that may have to cease work because of positive COVID-19 tests themselves or families.
- In some cases, research activities have been severely curtailed. In other cases, the quieter environment has allowed development projects to advance faster than planned.
- Ice services in the Southern Hemisphere have not been affected significantly yet but expect increasing impacts as the austral summer shipping season ramps up.

Session Transcript

Marianne Thyrring (Co-chair)

I want to turn now to a discussion with the ice service heads about coping with the COVID-19 pandemic. How did that hit our services? We have a list of people who have indicated that they are ready to talk about this item, so I'll begin with John Parker from Canada, please.

John Parker (Canadian Ice Service)

I'll try to make this quick because I know we're trying to get through a few ice services here. With regards to our COVID response, we transitioned to non-critical work working from home between the period of March 16 to March 23. That's really when it hit for us and we went into full lockdown mode with no one other than critical services working in our buildings after March 23. Operations were closed to non-critical services. We changed workflows so that people could not move through operations that weren't supposed to be there. We also identified individuals to provide backup in operations and began training. So we looked for those people who had recently been in our operations who had experience but now had another job, to see if they were interested to be backup in case we did have an outbreak that actually started to reduce our staffing complement. We went through a round of training in late March to ensure we had additional people that could be called in. We also were looking at alternative backup locations for the Canadian Ice Service. We are one building in one office and so we looked within Ottawa for another suitable location in case we had to shut down and do a deep clean of the office, but still had healthy staff that could work from another location. We also moved non-time-sensitive operational charts that were still considered mission critical, but that had a less critical time period, to try and work some of that from home. We had some technical issues. Still could do it but it was not the best workflow. We implemented

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special measures and procedures such as more frequent cleaning in our operational areas, making non-medical masks available to staff when two-meter distancing was not possible. We supported the International Ice Patrol with additional ice surveillance flights. We moved key meetings like our North American Ice Service meeting to online but continued to engage stakeholders virtually and participate in the virtual conferences and training and development. Our non-critical services work - our applied science, engagement, development activities - were hampered a lot by the pandemic. We are now pushing forward now that this is sort of a normal state. In March, we didn't know how long this was going to last. But now that we're seven months into it, we're really starting to push forward to understand how we can start some of our normal activities. RCM implementation was a key example of success during this time period. It was really ramping up into its implementation, just at the moment that this hit but we were still successful in doing that. We finished our winter season with the Coast Guard on the ships in April and then transitioned out of the regional ice centers to remote support for Coast Guard. We also have a class session where we're training new Ice Service Specialists that had to be moved from classroom to remote, so there had to be significant adjustment there. We're now continuing to respond to new guidance from the public health authorities and the overall government direction. The risk is different across our offices. We have a large country and in areas like Atlantic Canada, we haven't had a case in close to 14 days. Yet there are places in Ontario and Quebec and on the west coast where we're still having hundreds of cases a day. We still have to understand how each office is going to be working in response. We're definitely documenting our procedures for the COVID protocols in all of our areas, improving our business continuity plan. There's things that we've discovered that might need to get updated, for example, the neighboring office. If something were to happen, we used to be able to fly somebody to that office to help support the additional workload they might have to pick up if another office shut down. We need to rethink that, of course, and we've worked to make our contingencies more robust across our country. We came down to even changing traffic flows for people within our offices. Where we did have large centers, and CIS was one of them where we had sometimes six to nine people working at once, we split the traffic flow, separated washrooms, separated kitchens, so that if a part of the office were to have been infected or exposed, it doesn't take the whole office down. We are in the process of implementing our business resumption plan. We have a phased return to what might be a condition sometime in the future, hopefully in 2021, where there's no restrictions. It's a three-phase plan. We're in what's called phase zero right now, that's all our critical services. Phase one we hope to implement in October, which will be a slight incremental increase in our office buildings, which will allow some activity to start to ramp up a little bit more in that traditional office environment. And I think that's I think that's enough for a summary.

Soren Olufsen (Danish Meteorological Institute)

Most of this could be a repeat of what John just said. We also closed down operations totally and restricted access to DMI to two people having critical functions. Operations was closed to anyone not having or participating in critical functions. Regarding the meteorologists, we were able to transfer their workstations onto laptops they could work from home so even critical staff may have been working from home for a long period. In the ice office, due to the nature of the workstations, we could not do that, so we reduced the staff and we were able to use two rooms. We had two people on the staff for most of the time and they were separated in two rooms. To do that we had to restrict production a little bit. But no significant deviations from the minimum production was actually seen. We have had a few situations where people had somebody they knew, or somebody

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in the family, test positive. So, we had to keep them at home and send for somebody else to do the work. Fortunately, all of them tested negative when push came to shove. We actually had no positives in the critical staff.

Regarding the traffic in Greenland, the supply shipping for the society, and I have to remind you that no two towns or cities in Greenland are connected by roads - you sail or you fly or you travel on the ice. The supply shipping has been quite normal. The activity for the Navy in Greenland and around Greenland has been close to normal. Where we really did feel the COVID was in the traffic of tourist ships and cruise ships. There was just one operator. The Greenland pilots had expected 48 cruise ships during the season and they were down to five. Similar decreases would be seen by smaller vessels not having to have a pilot on board. So that was also a significant loss in commercial revenue for us about 85% or so. And with the commercial revenues that we have had was with supply ships, and one kind or another. So, we were able to reduce staffing and we have come through the summer with the normal winter staffing which saved us quite a lot. The summer shift, which is normally an increase, has been canceled. For the ice situation as such, I would say that it has been close to normal. Thank you.

Heather Quilenderino (U.S. National Ice Center)

Yes, hello, everyone. In the interest of time, I will do my best to talk about some of the things that are different than what John and Søren have talked about. Certainly, we saw very similar impacts. We went to maximum telework on the 17th of March. At that time, we were approximately 80% telework-capable with three standalone SIPAS laptops. SIPAS is our software system that allows analysis for sea ice. Within one week of going to maximum telework, we were at 100% telework-capable. We've been able to meet 100% of our operations with only one person in the office per day, with everyone else teleworking on laptops. We were fortunate that NOAA has a very robust telework system as well as an IT infrastructure that allowed us to do this, essentially right off the bat. One of the things that we found, in addition to meeting 100% of our operations, is that the additional time that we gained in teleworking, when we're having virtual meetings and some of the things that are streamlined when you're not in the office, is that we have been able to move forward on several of our transitions and initiatives projects that oftentimes get bottlenecked because we have so many requirements on our IT team. And so, we've been able to move many of these initiatives forward. The biggest challenge that we have seen is in our direct support to ships that rely on our onboard analysts. A lot of that has to do with the ship schedules not being firmed up because of impacts by COVID, as well as the additional two-week quarantine for our personnel when they arrive in the port of embarkation. We're going to see that as well with Operation Deep Freeze coming up. For Antarctica, we'll be able to provide support but those timelines, as well as the additional ship rider time because they're not making as many port visits, is certainly impacting our operations at home.

Vasily Smolyanitsky (Arctic and Antarctic Research Institute)

For the Arctic and Antarctic Research Institute and most of the meteorological services in Roshydromet, there was quite a low direct impact for operations and for the workflow of the products. Most of our experts continued to work from the office. Meetings with the clients, of course, were turned to online mode from the end of March till the present moment. Other responses were similar - social distances, etc. We also noticed that there is some kind of stimulation for the experts, as most of them feel that they are more in demand during this time. There was and there is some effect on training courses, as we had to postpone training for our new clients, from March

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to from March to autumn or even next year. But, at the same time, we are happy because we succeeded in training navigators who are already on the northern sea route before COVID. So, there is some effect, but not critical, for training. Of course, there is a drastic effect for expeditions as we had to postpone most of our scientific expeditions March to this autumn or next year. Actually, our first expeditions begin just this September. Lastly, there is a quite interesting effect due to lower ice conditions. We have had a greater demand from navigators for training. Because lower sea ice conditions mean a greater number of vessels with a lower ice class are going to the Arctic and a greater number of navigators need training. So that's basic ideas for my institution.

Marcus Hirschberg (International Ice Patrol)

Greetings everybody. I'm Marcus Hirschberg from IIP. I took over from Kristin Serumgard in late June of this year and very happy to be here. First of all I say we were fortunate it was a light iceberg season this year because COVID did impact the accuracy of our iceberg warning products. We share responsibility with CIS for North Atlantic iceberg warning products. As Mike mentioned earlier in his brief, there are two reconnaissance components - the satellite reconnaissance and the fixed wing aerial reconnaissance that we do. Our aerial reconnaissance is accomplished by our own members who deploy onboard Coast Guard aircraft on what we call IRDs, which are iceberg reconnaissance detachments. In a typical season we'd plan for 14 IRD deployments, which are nine-day deployments with an average of about four nine-hour flights. That would be a typical season flying out of St. John's, Newfoundland. It takes about an hour to get on scene to our area of interest where iceberg threat exists. This year, we had accomplished three IRDs in St. John's before the pandemic hit. During that period, we had one missed IRD due to lack of a Coast Guard aircraft which was responding to COVID operations. At that point, Kristin and the team came up with a plan, working with the air station, to shift the IRD deployments to Cape Cod, Massachusetts since we were unable to travel to Canada. We conducted six of those IRDs for a total of nine IRDs this year. However, the transit time from Cape Cod is much longer, close to three hours instead of one hour. So, we're looking at approximately 40% of the actual aircraft patrol time of what we normally have in a standard year. That definitely had an impact on our product. And, as John Parker mentioned, we did request additional commercial flights this year. But it also has impacted our satellite reconnaissance efforts and, to some extent, accelerated our efforts to move away from fixed wing aircraft, as Mike mentioned earlier, out of necessity. We changed from using a single iceberg drift model, the IIP model, to using both the NAIS and the IIP drift models and incorporating both into our analysis. That probably more than doubled the amount of effort required by our team conducting that analysis. We cannot work 100% remote so, while a lot of our folks did go to maximum telework, we're always going to require people in the office to access our iceberg analysis prediction system. So, we did have folks coming in and they had about double the effort. Fortunately, it was a light season, as I mentioned. We also increased our buffer from the iceberg to the limit from 30 nautical miles to 45 nautical miles this year. So obviously, we had a little bit less confidence in our product and that resulted in a dashed line and a note on the product, noting that it was an estimated limit and it was based on reduced reconnaissance.

Nick Hughes (Met Norway)

Most of what I was going to say has been said already by others. Norway went into lockdown in mid March. Here at the Met Institute, where our offices are spread between Oslo, Bergen and Tromsø, we reduced to the minimum number of essential staff - the duty meteorologists and duty service personnel in Tromsø. That reduced typical daytime staff down to around five or six people

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and those people would be widely separated within the office building. So, rather than having everyone in the main weather forecasting saloon, we moved desks around to different locations. We continue that pretty much at the moment. I think we're up to about 20 people maximum in our building. It's still the policy that, if people can work from home at the moment, they can continue.

Lisa Lund (Swedish Meteorological and Hydrographic Institute)

Our experience is very similar to what most other speakers have already talked about. SMHS implemented similar measures to most of the other meteorological institutes. Sweden hasn't had a proper lockdown but we have been working from home since the end of March. We are still largely working from home. As far as the ice service is concerned, we got off pretty lightly because most of the restrictions were implemented at the end of our season and our ice season was also very mild. So, the implications for operations have been very minimal. We already had the technical solutions in place to work from home. We've been doing that for a number of years. Because our closest colleagues in daily operations are in Finland, we're quite used to working with digital communications with our colleagues. So, we've been we've been coping quite well, on the operational side.

Antti Kangas (Finnish Meteorological Institute)

As Lisa said, we had good experience in shifting production from place to place and we were not really fixed in the office when the COVID hit us. In general, Finland didn't get the worst of COVID-19 yet so the impacts were not really high. We went on office lockdown over two nights in mid-March but we were allowed to work also from office. We are part of the weather services. I estimate that our ice shifts were done approximately 50% from the office and 50% from home. Social distancing and remote working were the two actions we took. We postponed non-critical work like development projects which gave us time to get ready for the kind of impacts related to the corona illnesses. Actually, since the actions were pretty good, we had less normal flu or other illnesses in the office among the people. So, we basically had no impact on the ice service in FMI. We are still continuing to work from home. We have plans to get back to normal business but, currently, we aim to continue to work from home. When we do get back to the office, we intend to work in two groups that have separate days in the office with one day out of the office in between, on Wednesdays. So, no major impacts but a lot of different kind of work.

CHAT LINE

Jürgen Holfort

In the German ice service, it was quite like Sweden and Finland. We were allowed to work in the office but most of us worked, at least for some time, from the office (home?) with quite good IT infrastructure for it). In Germany, clearly a larger impact was felt at the AWI with the Mosaic expedition.

Jan Lieser (Australian Bureau of Meteorology)

I think I can maybe talk for Alvaro as well as from our perspective. We see the impact in the upcoming season. COVID struck us in autumn and winter where there was no major shipping. The impact will be felt in the next coming months - November, December, January. We will see how that goes. From my personal perspective, I haven't been in the office since February, because of the situation, working from home exclusively. By the way, our office is getting refurbished, so we have reduced office space anyway. Thank you.

CHAT LINE

Alejandro de la Maza

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from Chile Navy Weather Service, our officers and crew have been deployed to support military enforcement of the COVID quarantine, but civilian professional staff are still working on a 50% rotational basis to maintain operations.

Marianne Thyrring

Thank you, all heads of ice services, for having shared your experiences with us all.