

Appendix M: Risk-Based Products Discussion

APPENDIX M: RISK-BASED PRODUCTS DISCUSSION

Introduction

Following is an edited transcript of the discussion that was held Friday September 25 during the wrap-up of IICWG-XXI.

Russ White

I think it makes some sense to have a task team that focuses on starting to look at the world of risk-based products from the perspective of various different products. Looking at how would we go about doing that and establishing some consistency in that domain would be really useful.

John Parker

I don't think we've shaped this (task) on products enough yet to actually get volunteers. I'm glad to see Scott put his hand up to interject. So, looking at John's list, it's a big, long list. I think some of them could be merged. I think if we get to the conversation of what we want out of this, there's an opportunity for risk based forecasts products task potentially. But I think that merges a bunch of things that John has on the list of things he's heard so far during this week. I think, if we get through that, then we can maybe see how we frame that tasking. But notwithstanding that Scott has put his hand up. So we'll let him talk. Scott, please.

Scott Weese

You took the words out of my mouth, basically, because, especially at CIS, we have both the iceberg and sea ice programs. There's a lot of overlap and the perspectives, especially when you talk about risk based and hazard based products. As John and Russ both know, we're already on our way to putting some of these pieces into place. So if I could apply that across the program in a more broad sense, for the task team, I think that's more suitable for my time and for my team as well too. I'm very keen on this kind of stuff as well. I'm happy to participate in that endeavor if we get to a formative place with this.

Russ White

I think that needs a bit more time to shake as John says, because I think there's potentially some other projects that might fall under that rubric. So, if we first focus on defining what it is we need to do in that area, some of the other tasks that are under discussion might come together and coalesce to a coherent set of activities.

Keld Qvistgaard

To say to Mike, that you can keep me in the loop on the risk based product. I think it's a tasking that we need to develop. And I think it's coming out of Task Team 2 and the work that's been done there. I'll be more than happy to contribute to the discussions, how we shape it up and how it's organized. I think that's at some point down the road.

CHAT LINE

Kevin Berberich (USNIC, NOAA)

Mike - Interested. Would be available to USNIC ops...will discuss with you offline.

Nick Hughes (MET Norway)

Mike - Interested too.

Appendix M: Risk-Based Products Discussion

Jürgen Holfort

Just looking at iceberg risk is perhaps a little bit shorthanded, perhaps better look on how to really ice, bergs, and weather play together.

Mike Hicks

Thank you, Keld. Both your and John's comments are exactly what I was thinking - that there's more to be developed on this. And through further discussion, I think it'll become clearer what we need to do and and who can do what.

Keld Qvistgaard

My final note on this is that I'll see some interface tool to Task Team 8 and the outcome of the work I've been doing over the past year. I think it goes hand in hand.

Ashok Pandey

Yes, good morning, all. I would like to contribute and help Mike in whichever way shape or form I can. Mike, if you're listening to me, I know that that there is a lot of stuff to do. If you can involve me or my expertise in anything that you do, I would be happy to do that.

Mike Hicks

Yes, Ashok. Thank you so much for joining. Just for the group's information, Ashok is a professor at the Massachusetts Maritime Academy. He was also a ship captain working off the Grand Banks. And back when I was the commander of the Ice Patrol, I recognized Ashok for several different seasons as being the ship with the most iceberg reports. He received our coveted Carpathia award. We've been working together here and there and I invited Ashok and am very happy that he was able to join this session. And so, thank you, Ashok. We will keep you posted. I really appreciate your offer.

CHAT LINE

Jennifer

Perhaps Dr. Ashok will have good influence on getting more ship obs of ice in the future and want to contribute to the methodology for tracking such input to improve VOS and validation?

Richard Hall (RICHH)

Keld risk based maps are today's #green ship routing" maps. This a popular topic at the moment

Bjørn Kay

Polaris is required by the polar code and that must be the product risk based for the ENC!!!!

Rudnickas, Donald W Jr LT USCG CG ACADEMY (USA)

Keld, I am definitely available and interested in the risk based products team as well...

Jürgen Holfort

What I think we hear from the discussion is that we don't have to concentrate on the technical things and how to get the charts in (S-411 format). We really need a new team not looking at ECDIS so much but more on an integrated system – call it e-Navigation. There is also interest in forecasts. I really see (the issue is): how do we get the information from forecasts, whether it be iceberg forecast or weather or ice, to mariners in a form that they can use them on the bridge in the

Appendix M: Risk-Based Products Discussion

short time available? Also, how is ice information to be used ashore for planning. We will have new products – sea ice and iceberg models. But how can we present them to mariners - not only as a portrayal but also just to say take notice. That's perhaps one task that should proceed further – getting current information to the mariners at sea. We also heard that different actors need to view this information – with different views for the planning.

Another task is to see how we can present model output to ship captains. I think that's more important than trying to put it into S-something. What really is the information we want to give to the individual people?

Russ White

Well, let me summarize back to what I'm hearing. You consider the work to be essentially complete as it was originally scoped. But you're looking in that area of how we actually produce products and services that are useful for the folks who are going to be using them. I think there's perhaps some connection to the risk based products that are being discussed. But I'd certainly like to hear comments from any others on what

John Falkingham

What I hear from some of this is that there's a big overlap between what Jürgen is suggesting and the other suggestions for this new task team on developing risk based products and new types of products. And there's a couple of aspects - one is the formulation of the products or the development of the products and then there's the “how do you communicate that to navigators”. Those are two ends of the same big problem, but perhaps two task teams could work together.

Joe Sienkiewicz

I thought that one key point that has been mentioned is basically interaction with mariners. That seems to be key for the proposed task. I'm just wondering if there's a way to word that. If I'm right, I think it's presenting information that's going to be used, then it's got to be in a format that understands what's going to be communicated.

Folomeev Oleg (AARI)

Keld - the main part of the interaction between mariners, customers of ice information and ice centers is the implementation of developments offered by all parties for practical use (for example in ECDIS), naturally after discussion at such meetings or workshops

Jurgen Holfort

So, it's not really about how to calculate the risk, how to make the models, everything else. That's for other teams. It's really how to communicate it to the mariners. And especially if we look at forecasts and models. It's a huge amount of data we have, and we really have to see how to condense it to be useful for the mariner.

Russ White

Yeah, so I think I think we are looking at this kind of broader theme of risk based communication with a with a number of components that could fit under there. So that sounds weird to me that you're suggesting completion. But I think there's some others that want to contribute here.

Appendix M: Risk-Based Products Discussion

Neal Young

I think, in all these things, the interaction between the two sides is going to be essential. Rephrasing what Jürgen said, I agree with these ideas, I like them. But learning what the mariners are discovering and learning from what we deliver to them. Does it answer their problem? So, I totally agree with what Jürgen is saying, but we need to know what they understand from what we produced. Does it address something?

Jürgen Holfort

Yes, but first it's really about what can we deliver to them? Then there has to be the feedback, from the mariners to say, yes, what you're delivering is fine. Also risk based products or forecasts.

John Parker

It's a great conversation, I mean, much better if we're in person in a room to be more dynamic, but I'll try to be short. So, it's just about a chewable chunk. We have so many great ideas that we've discussed this week. And, you know, getting it all done is going to be downright impossible. My suggestion is to take a few baby steps in this direction, over the next year given the situation we're in. Because it's going to be harder for some activities given our mission critical services. I'd suggest that if we create a new task team on hazards and risk based forecast products, that we look at a couple of avenues. So, we already have a good example, you know, with the iceberg heat map, that Mike Hicks and I presented. Look at that and see if that's something that we could create or start to develop a standard for so other ice services could replicate it. They're starting to use some good information like we did with ice charting and ice edges and trying to align everything. We spent decades coming to agreement on WMO terminology. We could do a similar kind of thing with this iceberg hazard map. Then, on the sea ice side, there are so many parameters in the model. Let's take a few and see whether or not we can start producing some risk maps, like ice pressure, for example. The CIS is working on an ice pressure map, a hazard map for day three. Are there other timeframes that we could look at in the model? How would everybody else replicate something similar, so we're talking the same thing. So if the mariner in ice north of Norway or south of Australia, sees a pressure map at day three, knows they're looking at the same types of parameters? I think that's the kind of thing that a task team could do over the next year - investigate that. They don't do that in a bubble, so all your comments about user engagement (are valid). I mean, our intention with our product is to engage with Coast Guard and other users of that product to see how well it is doing what it's supposed to do? Is it helping you? Is it showing you where the risk areas are to avoid for high pressure? I think that's the kind of thing I would recommend that this task team look at - not all of it because we can't do all of it. Just do a couple of snapshots of products that maybe, over a year, we can bring back to 2022 and say this is the progress we made. And we think this is information that we can pull out of models and start turning into regular routine products.

Vasily Smolyanitsky

Most of what I wanted to say has already been said by John and Jürgen. But in any case, when I monitor the situation on the Northern Sea Route, I can see a lot of demands from our clients. These are for risk products, for new forecast products, these are for the new formats. I would be glad to contribute to the e-Navigation task. I think that it's better to keep our interest in the forecast products inside the e-Navigation Group, not start a new group. For me, it's a bit of a vague situation with a forecast product. It should be just at the level of terminology or just the metrics. It's better

Appendix M: Risk-Based Products Discussion

just to extend the formats, which are all developed for e-navigation. That's a lot of things which we need to do, starting with the risks, starting with the terminologies, starting with new metrics. And, just for example, a couple of months ago, there was a question from our customers for new terms for the medium and ...(?). It looks like we obviously something when the activity is on the Northern Sea Route is just going northward, for example.

Alejandro de la Maza SERVIMET CL

- in fact the monitoring and forecasts could be an issue depending on each country weather services organizations: from some fully integrated to other divided into aviation, agriculture, marine and oceanography, working even on different institutions and ministries

- a good start for integrated regulations is the common IMO-IHO-WMO operation manual, since 2010 have been helpful for the standardization of that services and their communications

Russ White

So, we are sort of shifting between the new tasks and the current tasks. What I'm hearing is a completion of the navigation task team and I think there's a lot of support for the notion of a new task team that is focused on hazards and risk-based products. I think that would need to have a sort of a period of scoping to determine what that task team exactly would do. So, as we go through the agenda, we can perhaps circle back on that when we get to the long list of potential new tasks.

Russ White

While we do have everyone on the line, I would like to use the time to get some feedback about (the list of potential new tasks) in terms of if what we can tease out. It's a very long list. We cannot do all of these things. But if we can tease out some themes based on the discussion we've had during the week, if we could go through these items in a little less detail, we could leave a little bit of time for input from the group, about the groupings and the potential new areas that we want to explore.

John Falkingham

I've taken us down to the fifth one. I thought these were maybe in decreasing order of importance or do-ability. There's been a lot of talk about risk-based products, whether it's tied in through e-Navigation or something else. And somewhere in my list, I'm sure I've got that but I'm not sure where I fit in. So, I think everybody's got the list in front of them. Perhaps it would be appropriate to throw it back out to the group for comments on how this might be repackaged? Or are there particular ones that jump out that people think are important, and they would like to champion?

John Parker

It's a great extensive list but I think we can take the ideas of 7, 12, 13 and 14, and turn them into one on this risk based hazards forecast product. And then have a group of people who are interested have a conversation about that. I think that's a step forward for us. You know, not to oppose my colleague Vasily, but I think it needs to be outside of e-Navigation. Because right now, e-Navigation standards aren't looking at harmonized products between marine and ice. They don't have hazards products defined in the specifications yet. They have some of our standard parameters defined. So, I think this task team works independently of e-Nav. In a year, if we decide that there's something worth pursuing, then we can go back through the agencies that are officially connected to the standards, which we're all involved with, and see whether or not something needs to change on the e-Nav side for the future. But in the meantime, this can work in parallel with e-Nav because we may end up just being able to produce new products, without them being e-Nav capable but

Appendix M: Risk-Based Products Discussion

that are available in geo-reference form that can still be brought into people's information systems on the ship. So anyway, I think that 7, 12, 13, and 14 could be potentially brought all together.

Richard Hall

I'm not sure everyone agrees what risk is. When we're talking about risk, is it the risk of the quality of the ice products produced by the ice agencies? For example, in the weather forecast, you give an 80% chance of rain? Are we talking about that kind of risk? Or are we talking about something else? Because I, when I was listening to the conversation, it wasn't clear what the word risk meant to people.

Russ White

I think this is referring more to risk-based products and how we communicate risk to the user. But I'm going to turn to John to elucidate what he was talking about.

John Parker

What we're talking about here is the risk of a hazard happening. So something like ice pressure. Right now, we don't have good products through our ice services that show where there's maybe a significant increase in ice pressure in an area or a potential easing over time. So that's the idea of what we're thinking of pulling out of the models, as opposed to just leaving the models to be interpreted and producing a risk-based product on hazards that the users are interested in hearing about.

Richard Hall

The most famous risk based information from a weather service I can think of is the hurricane cones. I think if we're talking about the risk of a pressure occurring, pressure Ridge occurring in an area, then that makes sense.

CHAT LINE

Richard Hall (RICHH)

everybody calculates risk differently. The weather forecast is a risk map - will it rain? One person will take an umbrella, another a jacket, another will risk getting wet

Bjørn Kay

Before: Polaris - going into the area and doing observation and legal insurance side we need to update on new Polaris is and in the end detailed specialized info for special operations- after evaluation!!!

Richard Hall (RICHH)

The role of the ice agency to provide information, not risk. As a user I have to calculate the risk

Richard Hall (RICHH)

Ice agencies risk is the level of accuracy in the information

John Falkingham

I think they are talking about information that will help operators assess their own risk better

Bjørn Kay

High accuracy gives an experienced mariner best management decision possibility!

Appendix M: Risk-Based Products Discussion

Bourbonnais, Pascale

Agree with Richard. Risk is relative for each person/company/organization. Still, providing more information that helps to assess their risk should continue to be a long term goal. John P made some great points to that effect.

Bjørn Kay

In Canadian waters the authorities give you risk which you have to document and revise on board - it is in some countries on both sides. mariners can even go to jail when failing in Canada!!!

Richard Hall (RICHH)

Bjørn Kay As a user, the risk assessment includes local regulations as a starting point - the Canadian regulations are captured very early

Bjørn Kay

Richard Hall (RICHH) I know very well - have also signed a Canadian document - thats why the problem is when the Environmental officers which monitors your voyage can overrule you if needed! Hopefully not!

John Parker

That's the kind of thing I'm talking about. It's to lead the task team to work with individuals like yourself. And we've already had Pascal and Lisa mentioned and, and others. That's where I would see this task team going. Now, is this a single task team or what Mike Hicks intervened saying the complete continuum is to make sure it gets out on a beta site. I don't know if that's exactly what Mike intended but if, over the year, we work on what a couple of these risk based products could look like, then does that include the whole loop? The entire value chain loop of making sure we consult users all the way and we do that through having this beta test site process? So, I think Mike was talking about maybe even bringing 15 into those ones that I was talking about merging. I just let Mike confirm that. I'm making sure that we don't create overlapping task teams.

Mike Hicks

Yes John, that was my thought. I guess we have to look at this realistically to make sure it's something that's doable and achievable. Maybe that's stage two in this and we start doing that the following year. If it's too much to bite off. Maybe developing the products should be step one with a mind to have them on a platform like Polar View for beta testing and getting feedback.

Richard Hall

I'll be happy to be a user representative on that task. I can get feedback on that.

CHAT LINE

David Arthurs

Polar View would be interested in participating in a task concerned with integrating information and presenting it on ships and shore.

Lisa Kelley

If IAATO can assist with feedback on user needs etc from the expedition industry, we would be happy to.

Bourbonnais, Pascale

Same here with Fednav, we'll be happy to participate in any work that involves getting user feedback and needs.

Appendix M: Risk-Based Products Discussion

Jürgen Holfort

I would work in the risk task.

Bjørn Kay

I like to be user representative, too!!!

Vasily Smolyanitsky (AARI)

I am eager to contribute to the risk task though do not volunteer to lead the Team

Vasily Smolyanitsky (AARI)

For the risk team - the MSI (including weather, sea state) should be considered, of course, however, focus should be on the risks for ice navigation

Joe Sienkiewicz

Thanks John and John, I would like to be included. Bjørn Kay

Before: Polaris - going into the area and doing observation and legal insurance side we need to update on new Polaris is and in the end detailed specialized info for special operations- after evaluation!!!

Alejandro de la Maza SERVIMET CL

as part of the Maritime Authority we have a close contact with our end users of ice and weather information too

Andrea Gierisch (DMI)

Hi all, the Salienseas project is currently conducting a survey about barriers for maritime users to adopt new sea ice products. It is targeting both providers/developers of sea ice products (ice services, companies, R&D) and (Arctic) maritime users in order to study their different(?) perspectives. So, if you have time, we would be really happy to receive your input: <https://framaforms.org/salienseas-1597937927> Thanks in advance, Andrea (ang@dmi.dk)

Russ White

I think step one is to establish a point of leadership and convene those who are interested and have a view here to go through that initial scoping process.

Neal Young

I'm thinking in terms of the Southern Hemisphere here. These sorts of discussions about the risk of an event applies equally well to the other fields, to the atmospheric field, for instance. For several situations we've experienced which ended up in emergencies, the wanting to know what's going to happen with the weather and how certain we can be in that forecast is very, very relevant. Because, if you're near the coast, you have the combination of tidal currents, and wind. And if there's a storm coming and the wind is in one direction compared to the tidal current, one thing will happen. If it's in the other way, something quite different will happen. So timing, and the risk of that forecast, coming early, late, and so on, is very relevant. It's not just the ice things. It's the whole package.

Jurgen Holfort

Addressing what Neil said, that's a little bit too much for a task team for next year. We should keep to the basics. Think not only about how good the models are and where we get the risk out but

Appendix M: Risk-Based Products Discussion

really get an idea, an example, of how we can get this information from the models we have now out to the mariners in a risk-based operation? How to convey them? Yes, there is a also combined risk that's important to look at. But it's nothing we can do in one year, perhaps not even five years. We really have to focus on what really should we do.

John Falkingham

I just wanted to circle back and try to wrap this discussion up. Mike proposed a task that was fairly succinct. John Parker has some really good suggestions on the risk based product. I'm going back to this elephant that we want to eat in small bites. I really think that there's more than one big task here. Yes, we could lump a whole bunch of things together into one big task, but then I question how doable it might be. What I suggest is if we could schedule another meeting in another couple of weeks or with some of the proponents of this whole idea of risk based products, user feedback and whatnot and help to scope out one or two, possibly three tasks. And I see John has come on, and I'd like I'm sure you'd like to respond.

John Parker

Yes John. We're kind of spinning our wheels here. So how about you and I, the John's take on the task of talking about this offline, and then gathering people around who have been interested in this conversation throughout the week, and then have a conference call and work through this.