Agenda Item \_\_\_\_\_ -By USA

**Joint PAME-EPPR Project to Produce a**

**Compendium of Arctic Ship Accidents (CASA) - Status Update**

**Annex - Analysis of the data provided by member governments**

**for the CASA project**

1. **Summary**

For the most part, the data provided by each of the member governments is similar. However, there are some fields where they have not included information that could be helpful in rendering a clear picture of Arctic incidents between 2005 and 2017.

The data provided by the U.S. is the most detailed, and has the fewest gaps to fill in terms of outstanding columns. Canada’s data also satisfies the majority of categories on the master spreadsheet, but Canada indicates pollution generally and does not describe whether “pollution” refers to discharge of oil or some other discharge. In general, there is variation in the way governments indicate pollution. Denmark’s data is similar to Canada’s in that it provides a general indicator as to whether pollution has occurred. Norway’s data categorizes pollution as an “Accident type,” but does not otherwise detail whether pollution results from other accidents.

Other discrepancies between data sets include provision of incident IDs, latitude and longitude information, vessel names, information on any damage to the vessel, and (in Iceland’s case) date of the incident.

The following will describe the data provided by each of the member governments and will detail the fields where additional data from the member government would be helpful in constructing the incident report.

1. **Data Details**
2. *Canada*

Canada data conformed closest to that of the United States organizational structure. Canada provided detailed information on the date and location of the incident, the vessel involved (including name, vessel type, flag state, vessel age, and gross tonnage), and the type of incident. Canada includes an occurrence number/identifying ID for each incident, and also provided additional details regarding whether anyone on the vessel sustained a serious injury during the incident, though this data is not reflected in the mater spreadsheet.

As mentioned above, one grey area in Canada’s data is the type of pollution. Though Canada includes a general indicator of whether or not pollution has resulted from an incident, it does not provide any details regarding the pollutant released. In other words, whereas the United States data will state specifically whether a vessel discharged oil, Canada’s data does not. This information would be helpful in refining the spreadsheet, as we include a column specifically for oil discharge, and we want to ensure that the data there is accurate.

1. *Norway*

Norway’s data satisfies the vast majority of categories.. Norway’s data indicates the date and location of the incident, vessel details (including gross tonnage, flag state, vessel type, and vessel age), and details on the type of incident. Norway provides further information on the geographic location where the incident took place, but it can be tough to parse out, as it is in Norwegian, and it is unclear whether the areas listed are significantly distinct for the purposes of this project. Norway also includes a section on the extent of the damage, and it has more damage categories than the master spreadsheet contains, as Norway differentiates between serious and less serious damage.

However, while Norway’s data has a few blind spots. For instance, Norway designates pollution as an incident type, but does not otherwise indicate if pollution results from other incident types. Norway also does not provide any sort of incident ID, nor does it provide information regarding the name of the vessel involved in the incident.

Further information about pollution would be beneficial for similar reasons to the ones mentioned above for Canada. More specific information about the vessel name and particular incident could help us learn more information to be inputted later, but this data is not immediately necessary based on what data is currently being compiled into pivot tables.

1. *Denmark*

Denmark provided data for Greenland and the Faroe Islands. While Denmark’s data fills most of the categories on the spreadsheet, there are some notable fields missing. The data includes information regarding the date and location of the incident, the incident type, and the vessel (including vessel type, flag state, and gross tonnage).

Some of the data inputted can be sparse and inconsistent, and would need additional information to ensure the consistency and accuracy of any eventual report. First, Denmark does not include any information about incidents prior to 2010. Denmark provided latitude and longitude data in degree format as opposed to decimal format, which made inputting the locational information more difficult. Additionally, of the 26 relevant data points Denmark provided for the Faroe Islands, only 5 had latitude and longitude information, and Denmark provides no incident ID. Denmark provided a general pollution indicator, but more specific information would be helpful. However, attaining more complete geographic location data should be the priority for the purpose of this project.

1. *Iceland*

Iceland only had one incident to report that met the Arctic incident criteria. While Iceland provided good information about the incident type, including more specific pollution information and the geographic location, there are some very important categories missing. Most notably, Iceland did not provide a date for the incident. Acquiring the date of the incident is critical for this project.

1. **Notes on Reading the Arctic Incident Data in the Master Sheet**

The data received from some of the member governments, chiefly from the United States, had multiple data entries for a single incident with each entry detailing a different element of the incident. Since there were multiple incident descriptors, analyst prioritized the incident descriptor that seemed most severe in the final data entry into the Master Data Sheet. Thus, certain descriptors contain multiple incident descriptors within the one description. Most notably, any vessel that is listed with “sinking” as a consequence most likely had multiple other elements of the incident originally listed, such as a collision, grounding, equipment failure, or flooding, but we listed sinking since it was the most prominent incident descriptor.

The incident type category “Equipment failure/ Hazard to navigation” was always used for any references to loss or reduction of the vessel propulsion or steering, although often this category also contains a more general material failure/malfunction as well. Also of note, the descriptor “loss of electrical power” tends to contain within it the categories of equipment failure and hazard to navigation. This was not always the case, but it was the case the majority of the time.

More data about incident consequences for incidents that were documented by the United States should be added later. The United States also provided a narrative section that contained details of the vessel incidents. The narratives were not reviewed but could be helpful in improving the accident data