



Ph. 206.284.2522  
2303 W Commodore Way Suite 202  
Seattle, WA 98199  
[www.freezerlonglinecoalition.com](http://www.freezerlonglinecoalition.com)

---

January 28, 2022

Mr. Simon Kinneen, Chair  
North Pacific Fishery Management Council  
1007 West Third, Suite 400  
Anchorage, Alaska 99501-2252

**Re: D2 Longline Pot Gear for Bering Sea Greenland Turbot - Discussion Paper**

Dear Chairman Kinneen,

For the Council's consideration, the Freezer Longline Coalition (FLC) submits comments under Agenda Item D2 Longline Pot Gear for Bering Sea Greenland Turbot - Discussion Paper at the February 2022 NPFMC meeting. FLC would like to thank the Council for being responsive to our request to initiate this discussion paper in April 2021. Additionally, we commend NPFMC and Agency staff for developing a clear, well-organized document that we think provides the Council with a roadmap for action on this issue. FLC members have a long history of fishing for Greenland turbot in the western Bering Sea, but depredation of turbot by resident killer whales has become so widespread that we can no longer risk investments in what has been an important fishery for our members.

This Council successfully addressed whale depredation in the sablefish fishery by providing a regulatory option for the use of longline pots. That action allowed numerous IFQ holders to reduce losses and continue fishing. We are eager to apply that solution to the very similar situation we are facing with the Greenland turbot fishery in the Bering Sea.

It is our hope that an analysis will be initiated at this meeting to support a regulatory amendment allowing longline pots for directed fishing on Greenland turbot in the Bering Sea. Additionally, we suggest that this issue has many characteristics that would allow for quick resolution, i.e., implementation in time for turbot season in summer 2023. Specifically:

1. The action has a very limited scope. It proposes a simple regulatory amendment, not an FMP amendment that would require more extensive analysis,
2. There is an immediate need for this action to facilitate participation in this fishery, especially for those vessels in our fleet that have been historically dependent on Greenland turbot,
3. We believe the discussion paper thoroughly identifies the primary issues related to the proposed action, and
4. Based on our conversations with other fishing sectors, including participants in the turbot fishery, we don't anticipate concerns being raised that would necessitate an extended analysis.

The comments we provide below correspond to the major headings in Section 3 of the staff discussion paper; we also intend to submit verbal testimony to the AP and Council as appropriate.

## **About FLC**

The FLC represents the owners of 17 active (2021) commercial fishing vessels that participate in the freezer longline sector of the federal Pacific cod fishery in the Bering Sea (BS), Aleutian Islands (AI) and Gulf of Alaska (GOA). A subset of our members has also historically participated in the BS Greenland turbot fishery, which while a small fishery has served as an important source of revenue for these operators and crew, particularly in years of lower abundance in the cod fishery. Collectively, our nine member companies employ over 1,000 crew on their vessels each year, with about 20-25 crew deployed on a vessel on a given trip.

The mission of the FLC is to promote public policy that facilitates the sustainable and orderly harvest of Pacific cod and other groundfish species, including Greenland turbot. All members of the FLC who participate in the BSAI Pacific cod fisheries are also members of the Freezer Longline Conservation Cooperative (FLCC), a voluntary cooperative established in 2010 to sustainably manage the quota allocated by the Council to the freezer longline sector of the BS and AI Pacific cod fisheries. FLCC and its members work collaboratively with NMFS to ensure the efficient and responsible harvest of the Pacific cod quota allocated to the sector and frequently partner with the AFSC in support of research to better understand the Pacific cod stock.

## **Participation**

As the Council considers potential impacts on fishery participation (Section 3.1), we would suggest that several characteristics of the fixed gear turbot fishery should be kept in mind.

1. Small fishery - Staff note in Table 2-2 that for the past eight years, there have only been about 3 or 4 HAL CPs targeting Greenland turbot annually. In that same timeframe, with the exception of 2015, these boats have brought in less than 1,000 t. of turbot annually. This is simply because turbot are much less numerous than Pacific cod, our primary target. Comparing ABCs from the 2020 stock assessments for BSAI Greenland turbot and EBS Pacific cod show a difference of two orders of magnitude (6,572 t vs 153,383 t). This means that even when we are able to return to fishing, the turbot stock, while important to the operators who have relied on this fishery as a share of their revenues, will not support a large fishery.
2. Remote location - Turbot fishing by FLC members generally occurs where very few other boats fish at all – and there is a reason for this. Few boats can deploy and retrieve bottom longline gear from water hundreds of fathoms deep. Our vessels generally fish for turbot between 250 and 500 fathoms.
3. Marginal return - From a cost perspective, turbot catches often do not occur at levels that can support dedicated trips by our vessels. Like all FLC vessels, the boats targeting turbot with hook gear primarily harvest Pacific cod on the western Bering Sea shelf. Pacific cod fishing can then bring these boats near enough to the turbot grounds that they can venture further out over the slope and target turbot in deep water.
4. Processing requirements – As noted in the discussion paper, no CVs have participated in the directed turbot fishery. This is because turbot require rapid processing after being caught in order to retain product quality.

## **Pacific Cod ICA**

We understand, as pointed out in the document, that Pacific cod caught while targeting turbot with longline pots would accrue to the BS Pacific cod fixed gear ICA rather than our vessels' HAL CP cod allocation and that targeting cod with pots would be accounted for under the Pot CP allocation. In both cases, Pacific cod harvest by vessels using longline pots could, in theory, impact available cod harvest for the Pot CP sector in particular. However, the lack of Pacific cod encountered in the longline turbot fishery, as well as by the slope survey in depths where this fishery is prosecuted strongly suggest very little overlap between cod and turbot grounds. The experience of our vessels is that Pacific cod simply do not occur at the depths where our boats have historically fished for turbot. As such, we would not anticipate this action presenting any discernable risk to the allocated portion of BSAI cod for the Pot CP sector, nor to an increase in future Pacific cod fixed gear ICA.

## **Voluntary Agreement with A80**

The discussion paper references a voluntary agreement that is in place between the HAL-CP and Amendment 80 sectors regarding the harvest of Greenland turbot. This was established in 2015 at the encouragement of Council to better manage the annual harvest of turbot by fishery participants. Given the small number (if any) of expected new participants in this fishery (for reasons noted above), particularly from outside of the sectors party to the agreement, we do not anticipate this action to require a reworking of this agreement with the Amendment 80 sector, nor for this action to result in an impact on Amendment 80 turbot allocation under the agreement. We are conversing with the Amendment 80 sector representatives on any potential modifications needed for the agreement to reflect action Council may take on this issue.

## **Bycatch**

Analysts typically look at the potential for a given action to change the distribution and/or intensity of fishing effort in order to gauge impacts on bycatch, but this also applies to marine mammals and potential gear conflicts. In this case, the baseline consists of a small, directed fishery with negligible impacts on any of those environmental dimensions. When the fixed gear turbot fishery resumes subsequent to implementation, fishing effort will adjust in proportion to achieving historic catch levels and as constrained by the A80 agreement. We think fishing effort will be the same or less than the baseline as protection from killer whales improves catch efficiency. While analysts will have to consider the possibility of new impacts associated with the change in gear, we do not anticipate a discernable difference compared to baseline conditions.

The occurrence of non-target species in our turbot catches has not been an issue in the past. Which species might get caught is, of course, a function of which species are actually where our fishing gear will be set. As stated above, directed fishing for turbot by FLC takes place on the Bering Sea Slope. Therefore, in order to help the Council consider this issue relative to its current bycatch priorities, FLC examined catches from the NMFS bottom trawl slope survey. These data are publicly available ([https://apps-afsc.fisheries.noaa.gov/RACE/groundfish/survey\\_data/data.htm](https://apps-afsc.fisheries.noaa.gov/RACE/groundfish/survey_data/data.htm)) providing depth distributions of Greenland turbot as well as those potential bycatch species identified in the discussion paper (NPFMC-managed crab, Pacific halibut, sablefish, and Pacific cod). Prior to our analysis, we consulted with Jerry Hoff, Chief Scientist for the AFSC slope survey, and we thank him for his guidance on the proper handling/interpretation of the published survey data. We note that the slope survey has only been done in a limited number of years (2002, 2004, 2008, 2010, 2012, 2016) however, for the years available, the depth

distributions of fish species were reasonably consistent from year to year. Importantly, the slope survey occurs during the summer, and therefore, it reflects catches of species during the same time of year that the turbot fishery is in operation.

In order to get a sense of the likelihood for a given species to be caught during directed turbot fishing, we assigned a cut-off depth of 225 fathoms (fm) as the shallowest we would likely fish for turbot. Additionally, only stations in areas 3-6 (see Figure 1) were included since our boats do not fish for turbot in areas 1 and 2.

Figures 2-8 characterize the depth distributions of the species of interest, and in each figure a vertical dashed line is used to provide a visual sense of the species' distribution *on the slope* relative to the turbot fishery. Because slope survey depth intervals start at 100 fm, the figures don't illustrate the biomass of the various species in shallower water such as up on the shelf, which except for turbot would likely be where most of their biomass occurs.

The figures are fairly straight-forward; however, we provide comments below on the listed species and species groups. As a general note about the figures, it is usually desirable to maintain a consistent scale on the Y-axis in order to provide a more visually intuitive sense of magnitude when comparing among the figures. This was done for the finfish species, but not for crab, where the Y-axis scales had to be adjusted in order to make the bars visually discernable. Relatedly, one thing that is pretty apparent in the figures - Greenland turbot dominate the slope survey catches compared to other included species.

#### Pacific cod

Pacific cod are included because the forthcoming analysis will need to characterize the ability of longline pot boats to separately target cod or turbot and relate this to potential use of the Pcod ICA as well as impacts to the Pot cod sector. As depicted below, the slope survey catches of Pacific cod are consistently limited to shallower portions of the slope. This strongly suggests that turbot targeting will rarely result in cod being caught, at least not in significant quantities. From this and based on our own experience, we do not expect the action to result in changes to our use of the cod ICA or the pot cod allocation.

#### Crab

Staff identify the potential for elevated crab bycatch in the discussion paper, but also note that such an outcome is speculative and would reflect movement of crab to depths that have not been observed. The slope survey data do not show significant amounts of any of the listed crab in the area where turbot fishing would occur. Note that the depth distributions for crab in the figures below do not include red king crab or blue king crab. This is because these species did not occur in the slope survey for any year covered by the published data.

The slope survey catches do show low-level occurrences of golden king crab in areas where turbot fishing would occur. Since we truncated the survey data to areas we are likely to fish, i.e., not the southern portion, these crab may be associated with the Pribilof Islands golden king crab stock which supports a limited and sporadic fishery. The management boundaries between PIGKC and the much larger AIGKC stock to the south may or may not reflect biological reality. The Council has generally been more involved in management of the larger Aleutian Islands golden king crab stock. We note that our observer records do not show any golden king crab when turbot fishing with HAL gear.

Snow crab are infrequently caught in the slope survey with some years showing no catch and others showing a concentration of snow crab in a single depth stratum. None of the snow crab catches were within the depth zone associated with the turbot fishery.

Tanner crab also appear not to extend deep enough to be caught in the turbot pot fishery. Compared to snow crab, Tanner crab appear to be more spread out across a range of depths, however the deepest catches of Tanners were on the upper margin of the turbot fishing zone.

### Sablefish

are well within the areas where turbot occur. Possibly more than any other listed species, the abundance of sablefish has changed dramatically since the last year of the slope survey (2016). Although there is not a standing PSC limit on sablefish, bycatch will likely occur in the turbot pot fishery just as it occurs in the HAL turbot fishery.

As the Council has heard from numerous sources, sablefish are famously robust with regard to discard mortality. We think that switching to pot gear will result in fewer sablefish discard mortalities relative to the same or greater effort using hook gear.

We also note that several of our members own of Class A sablefish IFQ. They and other members are familiar with the requirements associated with retention of sablefish. Additionally, we are aware that in-season management is collecting information on sablefish bycatch hotspots to help A80 vessels reduce bycatch. We would welcome this information in our efforts to reduce sablefish bycatch.

### Pacific halibut

The discussion paper shows zero halibut bycatch by pot gear in the western Bering Sea (Tables 3-1 and 3-2). Despite this, the slope survey data suggests that we could potentially encounter halibut as we fish the shallower contours of our turbot fishing zone. We do not think this would increase risks to the halibut stock relative to the status quo. Additionally, we note that halibut DMRs are very low for pot gear, and there is no halibut PSC limit for pots. Our halibut mortalities are well below the PSC limit for Bering Sea HAL CPs, and we suggest that an allowance for turbot longline pots would represent a further decrease in our impacts to the halibut stock.

#### *9-inch pot opening*

FLC appreciates staff raising the issue of the 9-inch maximum tunnel opening when vessels do not have halibut IFQ. Although we do not want to delay implementation of a pot allowance with additional analyses, we may find it necessary to advocate that Council consider including an exemption from that restriction as it would apply to the turbot longline pot fishery. Since the turbot fishery occurs at greater depths than halibut tend to occur, and the risk of bycatch mortality is very low, the need for gear modifications to reduce halibut bycatch would not be necessary. As an alternative, our members have discussed a 14-inch opening for turbot pots. Hopefully an analysis would be able to characterize the minimal nature of the impact to the halibut stock and the protection afforded to halibut by the natural separation of the two species along the slope depth gradient.

### **Protected Species**

Section 2.3 of the discussion paper makes several strong points about the occurrence of depredation of Greenland turbot by killer whales. In particular, Greenland turbot tops the list in Table 2-8 of species that onboard observers have identified as subject to depredation on HAL CP trips.

Regarding points raised about the potential for whale entanglements, that concern centers on the potential for increases in the number of vertical lines associated with fishery effort in the area. It is important to bear in mind that an allowance for pots would not create a new fishery in the sense that effort on a particular target in a particular place had not occurred. The strings of longline pots set for turbot would have vertical buoy lines at each end, just as occurred

with longline hook gear. Just as our boats currently deploy longline hook gear by setting out three strings at a time before retrieving, we would fish longline pots in the same manner. This would present conditions on the fishing grounds that are not differentiable from the status quo in terms of the amount of fishing gear.

Additionally, we anticipate that the diameter of the vertical (buoy) lines would likely increase for pots relative to HAL gear due to the greater weight of the pots and groundlines. This is consistent with the gear characteristics noted by staff as potentially lowering the risk of entanglements. Slinky pots have not been suggested by our members for turbot fishing, and we understand that any future restrictions on pot gear could potentially apply to this fishery. Some of our members will provide public testimony on the gear they intend to use and could answer questions about other gear characteristics that staff believe would further reduce marine mammal concerns.

There is some speculation in section 2.3 about whether some vessels would continue to use hook gear - this simply would not happen. Our members have been completely shut down using hook gear for turbot and the killer whales have taught us that it is a waste of time trying to sneak hook-caught turbot past them. The only way for our members to return to this fishery is through adapting to these conditions and switching to pot gear.

Finally, we would like to point out that although FLC has undertaken extensive effort to minimize seabird impacts while longline fishing, the deployment of longline pots should result in an overall decrease in those encounters.

### **Economic Impacts to Freezer Longline Fleet**

As referenced above, the Greenland turbot fishery has historically been an important source of income for freezer longline vessels participating in the fishery. As a fleet that is nearly entirely dependent on the fortunes of one stock, Pacific cod, the ability to harvest Greenland turbot helps to offset lower revenues or additional costs associated with the cod fishery year-to-year and to otherwise provide additional revenues to be directed to our crew and to reinvest in our fleet. Table 2-3 in the discussion paper details the revenue dependency of the freezer longline vessels that have targeted Greenland turbot, based on "per vessel" gross first wholesale revenues generated from the turbot fishery versus harvest in other fisheries. The table notes an average (and median) dependency on the turbot fishery of 12%, a significant number particularly given the tight profit margins that operators face in our industry. As the paper highlights, the increased whale predation of turbot has largely precluded operators, and our crew from participating in the fishery. For freezer longline participants, this is compounding the challenges they are facing from the decline in cod allocations, COVID-related matters and other pressures on the cod fishery. An expedited return of harvest opportunity in the turbot fishery would assist in restoring lost revenues and support our operators and crew that have historically relied on this fishery to help support their livelihoods.

Thank you for your consideration.

Sincerely,



Chad I. See  
Executive Director  
[chadsee@freezerlongline.biz](mailto:chadsee@freezerlongline.biz)

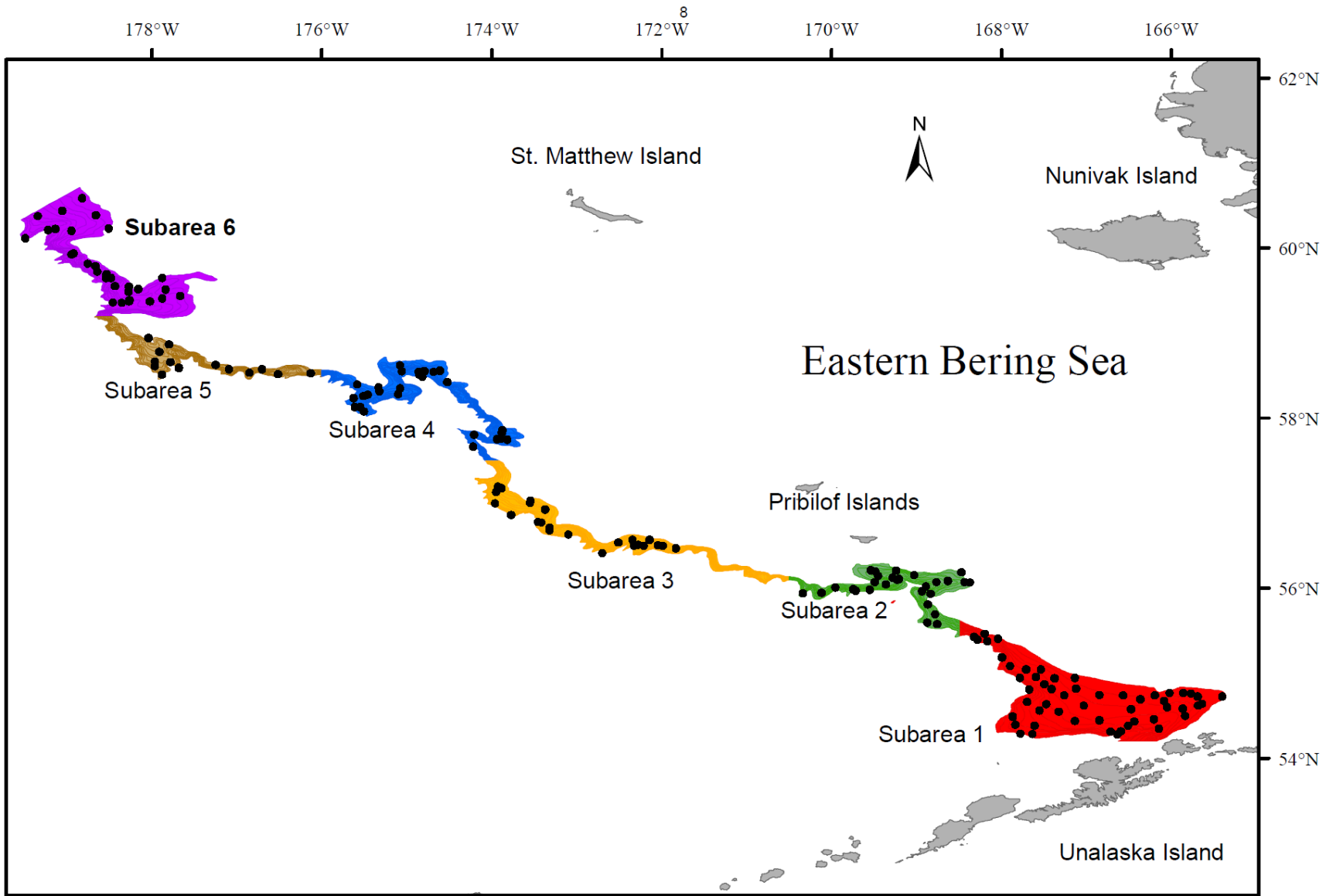


Figure 1. Map of standard slope survey area and the six subareas. From NOAA Technical Memorandum NMFS-AFSC-339

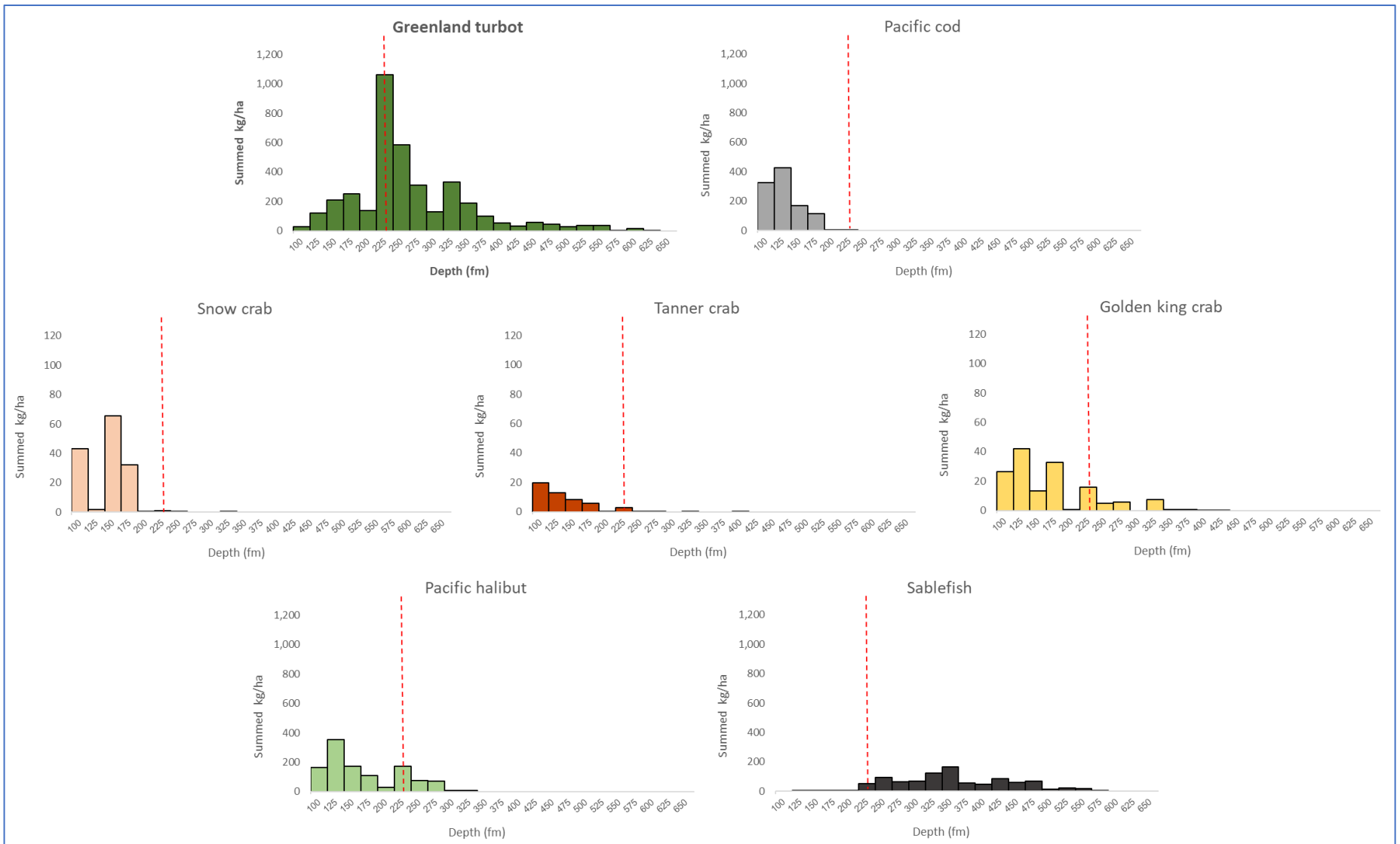


Figure 2. Depth distributions for NMFS slope survey catches of Greenland turbot and several other species identified in the D2 discussion paper 2002-2016 combined



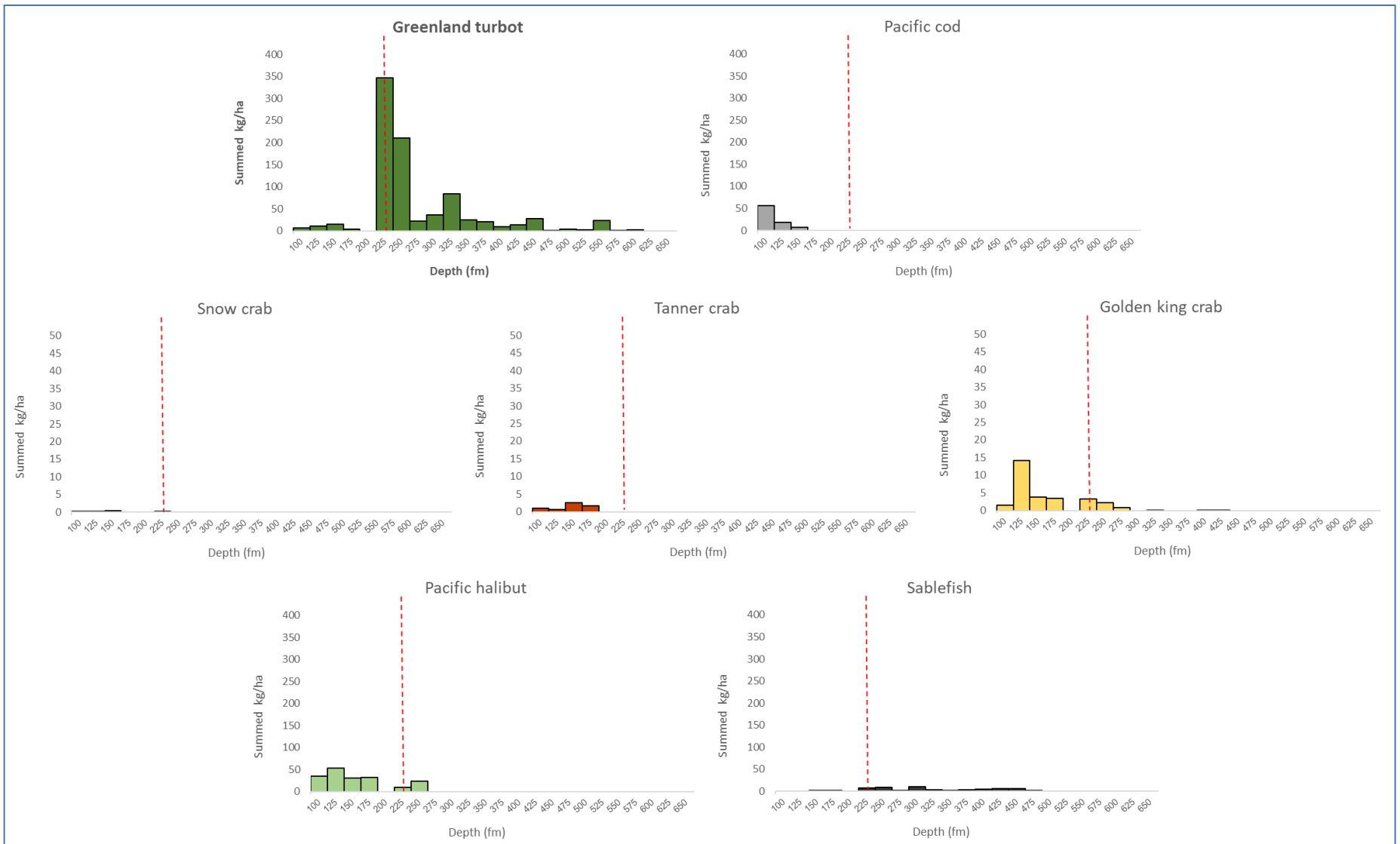


Figure 3. Depth distributions for NMFS slope survey catches of Greenland turbot and several other species identified in the D2 discussion paper  
Year = 2016

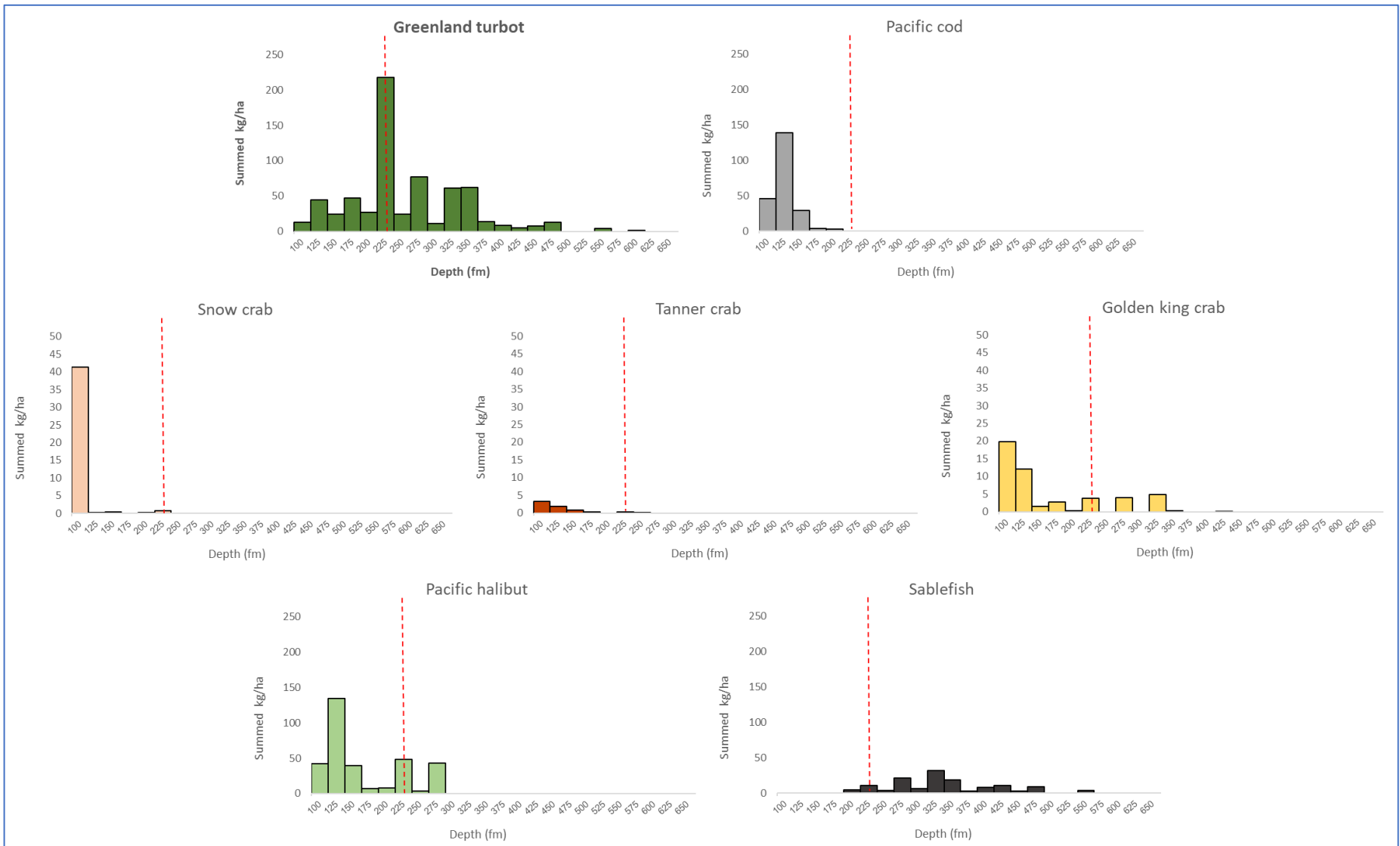


Figure 4. Depth distributions for NMFS slope survey catches of Greenland turbot and several other species identified in the D2 discussion paper Year = 2012

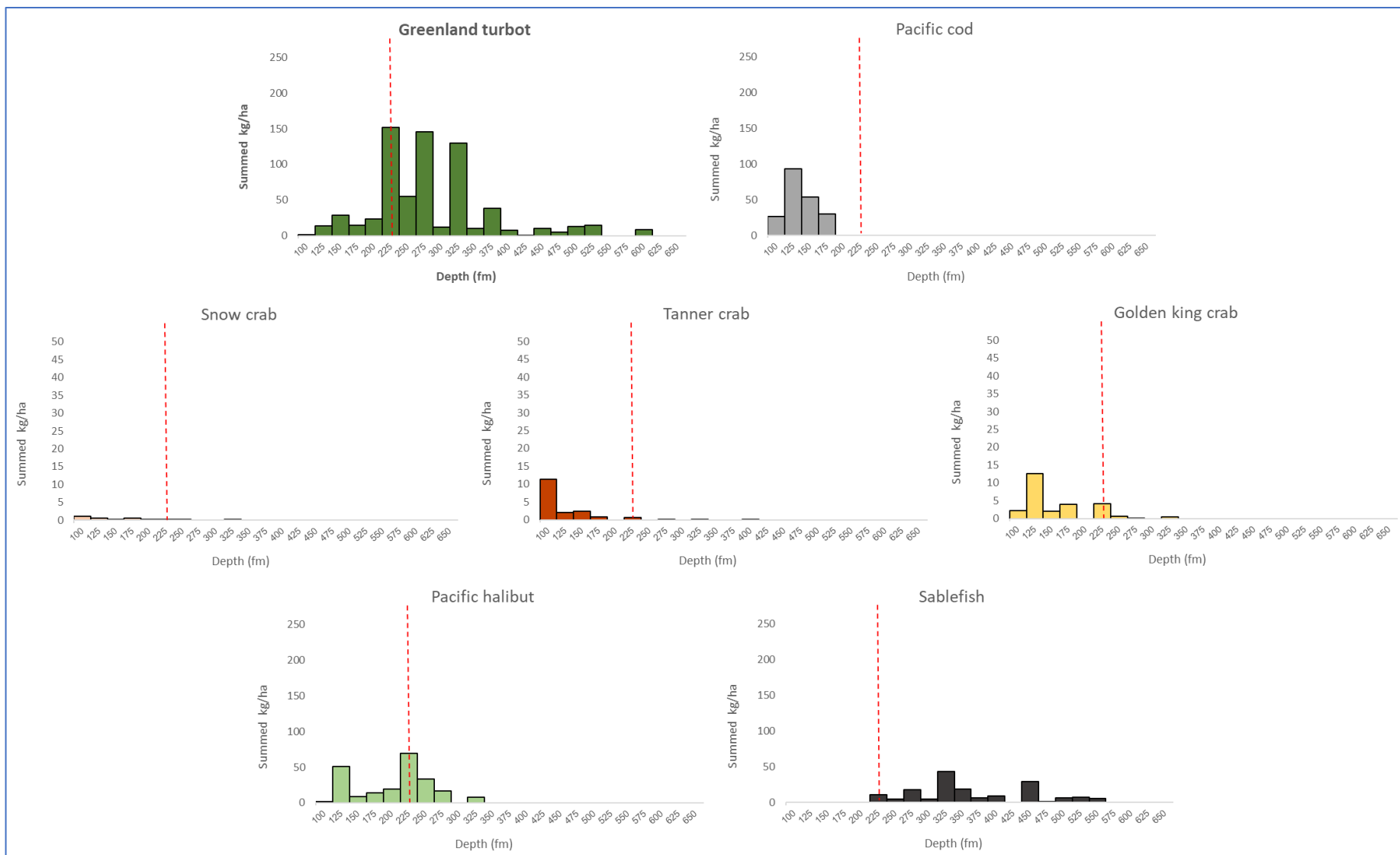


Figure 5. Depth distributions for NMFS slope survey catches of Greenland turbot and several other species identified in the D2 discussion paper Year = 2010

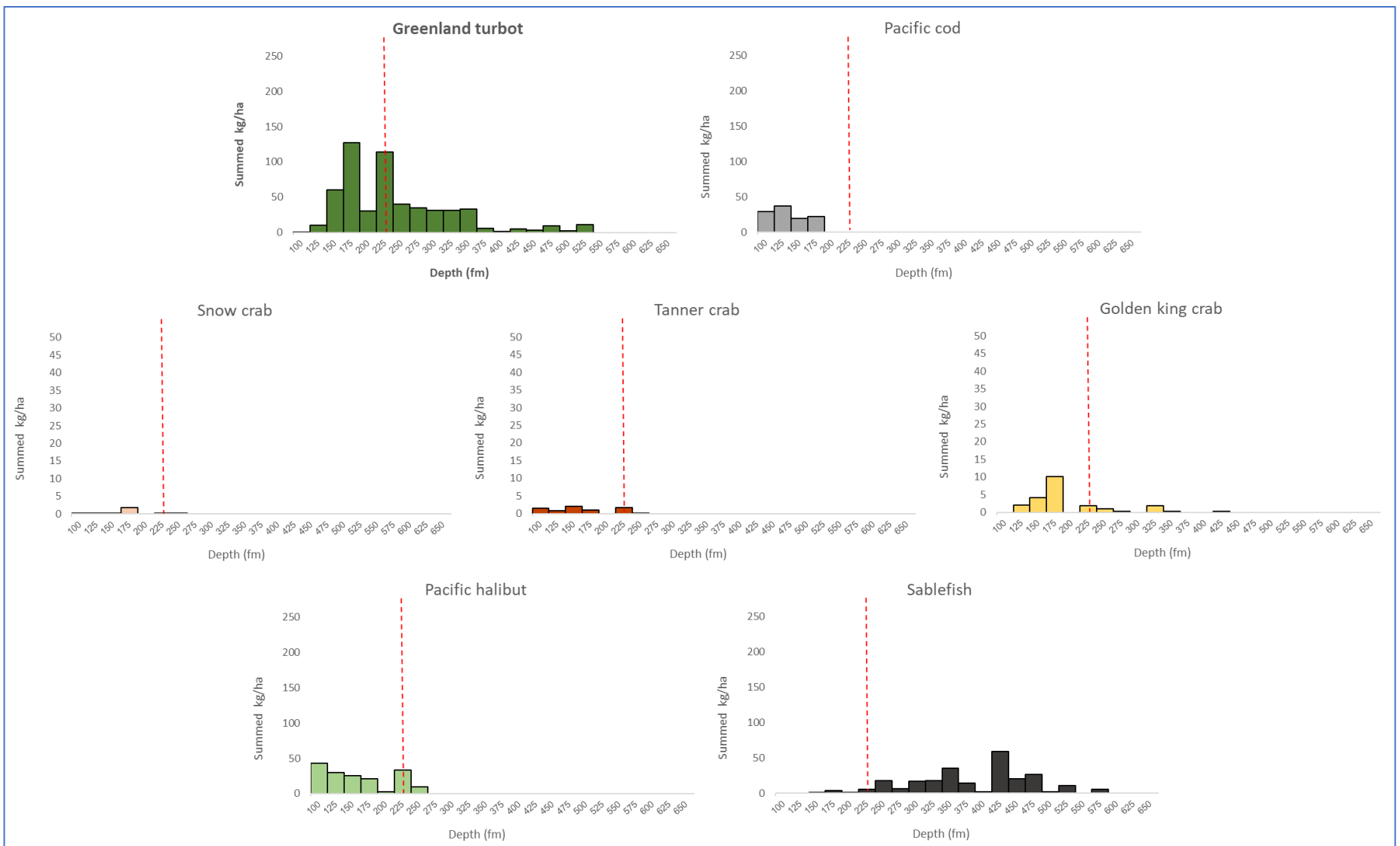


Figure 6. Depth distributions for NMFS slope survey catches of Greenland turbot and several other species identified in the D2 discussion paper Year = 2008

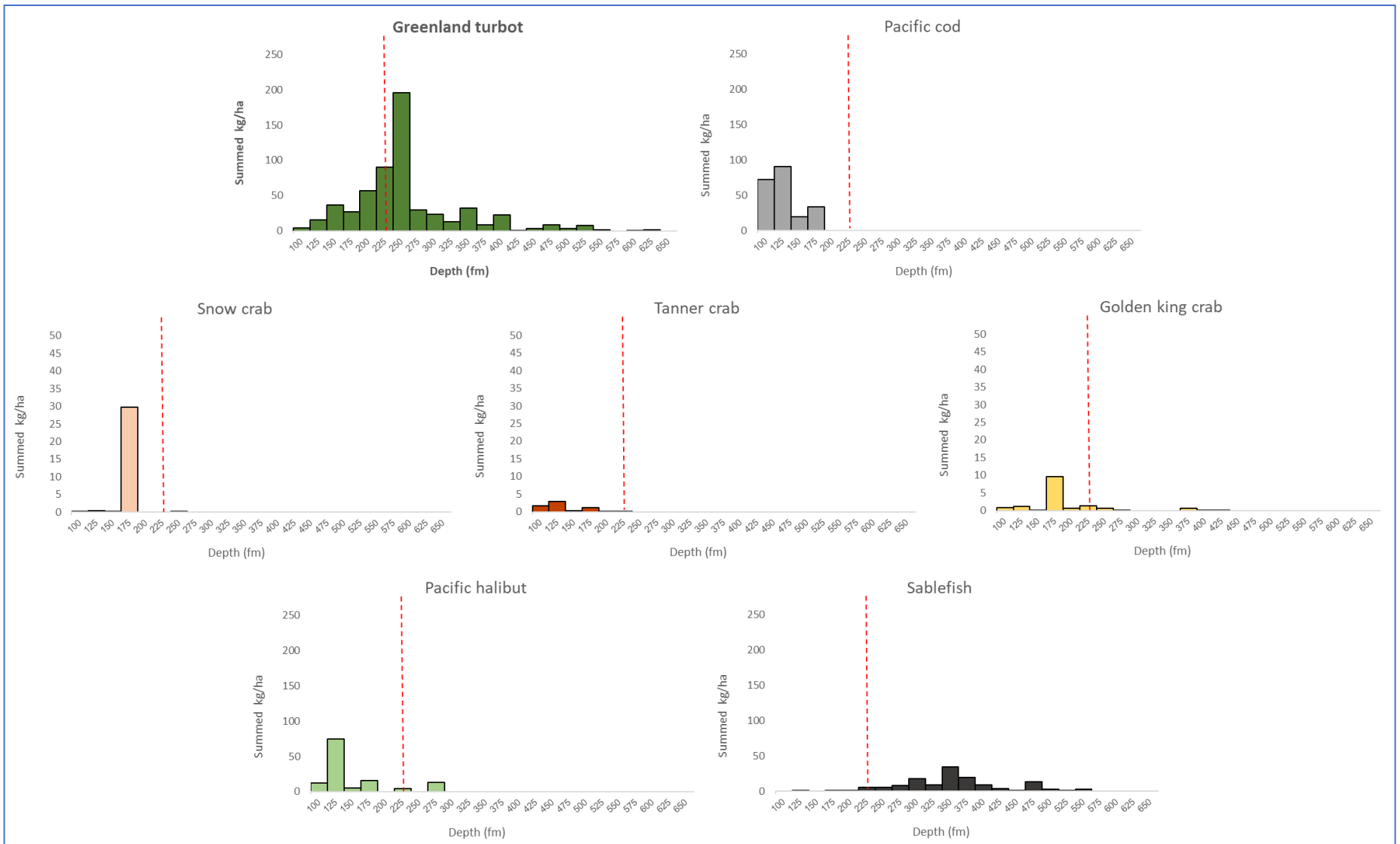


Figure 7. Depth distributions for NMFS slope survey catches of Greenland turbot and several other species identified in the D2 discussion paper Year = 2004

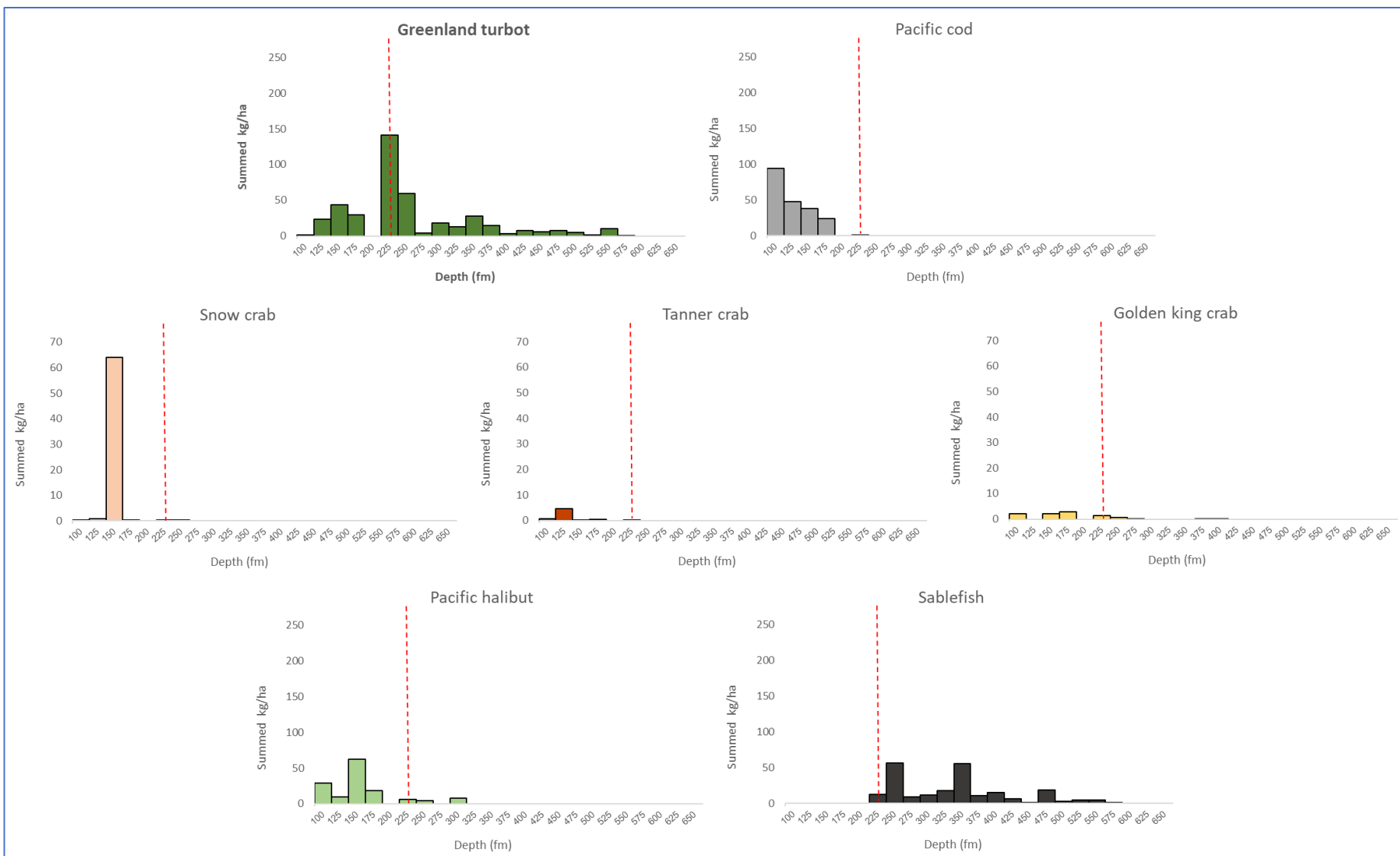


Figure 8. Depth distributions for NMFS slope survey catches of Greenland turbot and several other species identified in the D2 discussion paper Year = 2002