Deep Sea Corals Workshop Summary

Wednesday, April 29, 2015, 1:00 PM – Thursday, April 30, 2015, 3:30 PM

Doubletree Baltimore BWI Airport, Linthicum, MD

Workshop Overview

The Mid-Atlantic Fishery Management Council convened a workshop in conjunction with a joint meeting of the Council's Mackerel, Squid, and Butterfish Advisory Panel (AP) and Ecosystems and Ocean Planning Advisory Panel. The purpose of this workshop was to review and refine the spatial alternatives for discrete coral protection zones proposed under the Deep Sea Corals Amendment to the Atlantic Mackerel, Squid, and Butterfish Fishery Management Plan.[1] Workshop participants included the Squid, Mackerel, and Butterfish Advisory Panel, the Ecosystems and Ocean Planning Advisory Panel, members of the Fishery Management Action Team (FMAT), deep sea coral experts, additional fishing industry representatives, and other interested stakeholders.

Workshop Objectives

The objectives of the workshop were to:

- Review all proposed discrete coral zone alternatives, including alternatives proposed by industry advisors during the public comment period;
- Identify key areas of importance for coral protection and fishing activity;
- Develop recommendations for modified discrete zone boundaries for Council consideration; and
- Summarize advisor and other stakeholder comments related to discrete zone alternatives, transit provisions, and proposed exemptions.

Workshop Format

The workshop began with an overview of the amendment purpose and development timeline to date. Following this overview, representatives from each group that had put forward discrete zone boundary proposals (see below) gave an explanation of their methodologies for developing their boundaries. The majority of the workshop was spent evaluating the boundary options for each individual proposed discrete zone in detail. Each canyon area was discussed with consideration of coral observations and predicted habitat, as well as fishing effort and operational needs in and around the area. Participants proposed boundary modifications, which were drawn by a GIS analyst in real time. Modifications were generally negotiated point-by-point or edge-by-edge, with discussions of tradeoffs between coral protections and the operational needs of fishing vessels. The workshop concluded with a discussion of the currently proposed exemption alternatives and the potential to allow transit through proposed coral areas.

Discrete Zone Boundaries Considered

Discrete zone boundaries reviewed at the workshop included several options proposed at various stages of amendment development. These included:

1. Boundaries developed by the FMAT in April 2014;[2]
2. Boundaries submitted during the February 2015 public comment process by Garden State Seafood Association (GSSA), representing a group of fishing industry stakeholders;
3. Boundaries submitted by several Squid, Mackerel, Butterfish Advisors in 2013, for Baltimore Canyon, Norfolk Canyon, and the Mey-Lindenkohl Slope; and
4. Boundaries submitted for consideration prior to the workshop by a coalition of NGO representatives and Ecosystems Advisory Panel members.

Canyon discussions and workshop boundaries are summarized below in the order in which they were discussed at the workshop.

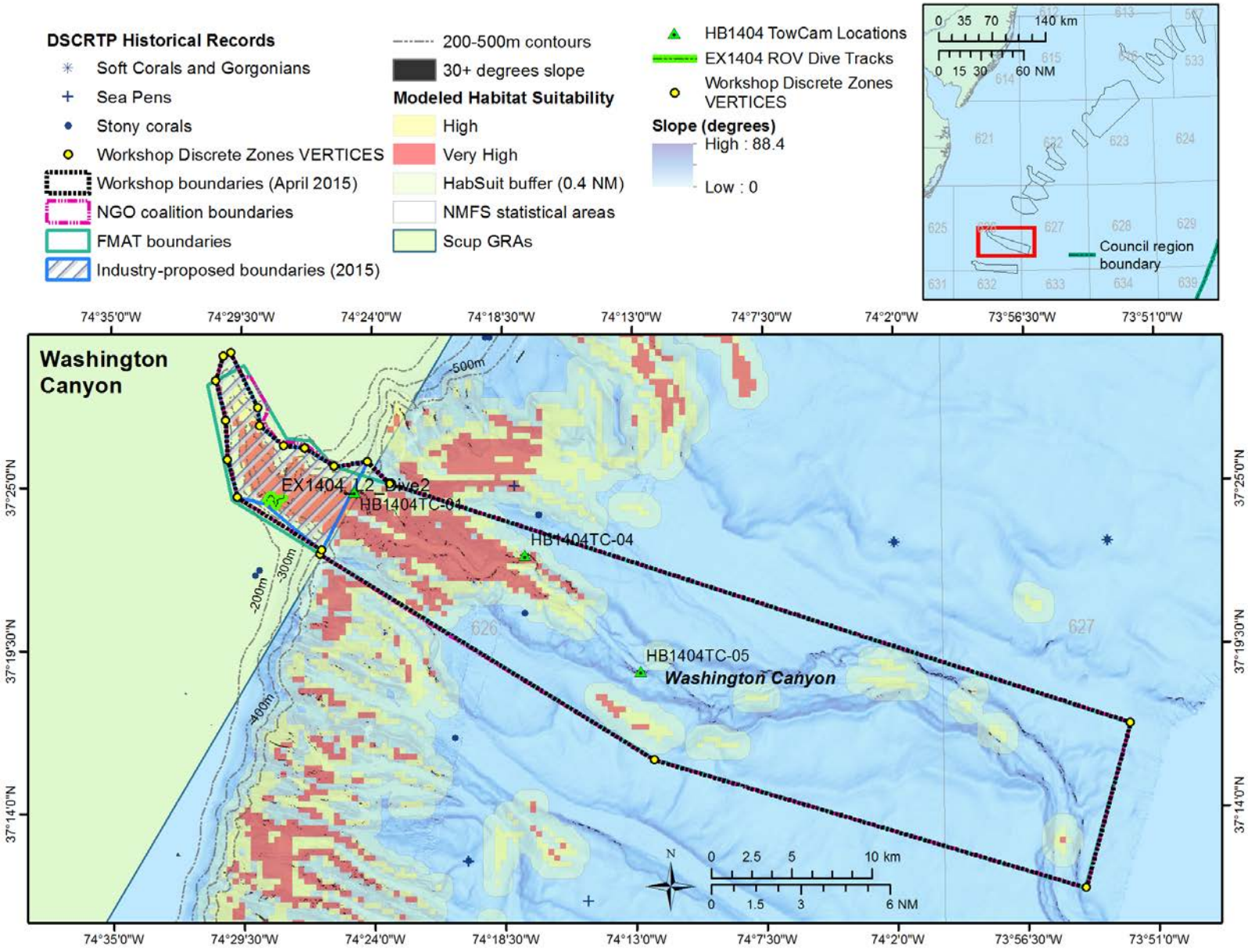
[1] http://www.mafmc.org/actions/msb/am16.

[2] See Appendix A of the Public Information Document for methodology details.

Workshop Attendees

Rick Robins (Council Chairman)
Lee Anderson (Council Vice-Chairman)
G. Warren Elliott (Council Member; Ecosystems Committee Chair)
Howard King (Council Member; MSB Committee Chair)
Dewey Hemilright (Council Member)
Jeff Deem (Council Member)
John McMurray (Council Member)
LCDR Patricia Bennett (Council Member)
Laurie Nolan (Council Member)
Chris Zeman (Council Member)
Chris Moore (Council Executive Director)
Brad Sewell (Ecosystems & Ocean Planning AP)
Fred Akers (Ecosystems & Ocean Planning AP)
Greg DiDomenico (Ecosystems & Ocean Planning AP)
Jud Crawford (Ecosystems & Ocean Planning AP)
Pam Lyons Gromen (Ecosystems & Ocean Planning AP)
Robert Ruhle (Mackerel, Squid, Butterfish AP)
Eric Reid (Mackerel, Squid, Butterfish AP)
Hank Lackner (Mackerel, Squid, Butterfish AP)
Kristen Cevoli (Mackerel, Squid, Butterfish AP)
Lars Axelsson (Mackerel, Squid, Butterfish AP)
Patrick Paquette (Mackerel, Squid, Butterfish AP)
Peter Moore (Mackerel, Squid, Butterfish AP)
Jon Williams (NEFMC Red Crab AP)
Dan Farnham (NEFMC Whiting AP)
Martha Nizinski (NMFS National Systematics Lab)
Sandra Brooke (Florida State University)
Peter Auster (University of Connecticut & Mystic Aquarium)
Dave Packer (NEFSC Coastal Ecology Branch)
Brian Kinlan (NOAA NOS NCCOS)
Kevin Chu (GARFO Stakeholder Engagement)
Carly Bari (GARFO Sustainable Fisheries)
David Stevenson (GARFO Habitat Conservation)
Kiley Dancy (Mid-Atlantic Council Staff)
Mary Clark (Mid-Atlantic Council Staff)
Jessica Coakley (Mid-Atlantic Council Staff)
Michelle Bachman (New England Council Staff)
Glenn Goodwin (Seafreeze)
Annie Hawkins (Fisheries Survival Fund)
Aaron Kornbluth (Pew Charitable Trusts)
Megan Driscoll (National Aquarium)
Paul Ticco (NOAA/ONMS East Coast Regional Coordinator)
Meghan Lapp (Seafreeze)
Lucas Marxen (Rutgers University)
Mark Swingle (Virginia Aquarium & Marine Science Center)
Noah Chesnin (Wildlife Conservation Society)
Jay O'Dell (The Nature Conservancy)

Washington Canyon



Washington Canyon was the first area considered. Discussions initially focused on the south side of canyon, on the triangular area between the GSSA and NGO coalition boundary. An NGO coalition member pointed out that here there were no vessel tow tracks in that area based on available data, but there were some areas of high slope. An industry member questioned the goal of drawing the boundaries – is it to protect 100% of corals? He indicated that the GSSA proposed boundary does a good job of protecting corals. The apparent absence of tow lines close to the boundary does not mean that they don't tow in that area. In response, an NGO coalition representative noted that if the areas of steep slope in question serve as a buffer for the industry and aren't being trawled, then it seems as if it could be included in a coral zone.

However, industry representatives noted that lines drawn too far toward the sides of the canyons reduce a vessel's flexibility to haul gear back and get off the bottom. If the line is drawn further out, and a vessel is fishing on a windy day, they would be pushed over that line. While they do not tow directly in areas of high slope, the GSSA boundaries are drawn with consideration of operational needs. GSSA drew their proposed lines with enforcement in mind, as they are looking to protect both corals and the industry.

A scientist noted that when conducting coral surveys in the field, they combine the regional scale habitat suitability model with the 25m resolution slope data to find specific locations to survey. Part of the FMAT's buffer choice (0.4 nautical miles) is due to the resolution of the habitat suitability model (0.4 nautical miles = approximately 2 model grid cells), but this buffer was also chosen partly for enforcement purposes. It may not matter what 99% of tows do, but it only takes one miscalculated action to damage sensitive habitats. Biologically, if there's a minute chance of positioning in that area, this presents risk. The multibeam bathymetry and slope data is precise and high resolution, and we can be very confident in the areas of high slope depicted on the map. When those high slope areas overlap with high and very high habitat suitability predicted by the regional model, it's a very high likelihood that corals are present.

The discussion shifted to the areas extending to deeper waters (eastern boundary). A participant questioned why the GSSA boundaries consistently cut off deeper areas. Because there is little to no fishing effort in most of these very deep areas, the industry representatives agreed to extend the eastern boundaries to follow the FMAT boundaries.

On the south side of the canyon, industry participants agreed to adjust one vertex out to encompass a small area of high slope and suitable habitat, but this area remained an area of conflict and was not agreed to at this point.

The proposed NGO and GSSA boundaries were identical at the canyon head and closely aligned on the northern edge. Industry representatives felt strongly about retaining the northern boundary as proposed by GSSA.

An NGO coalition member proposed that participants should agree on a consistent buffer that could be applied to multiple areas, so that the discussion did not need to move around each canyon point by point. The NGO coalition would prefer the southern line to be the NGO line. In their methodology, the NGO coalition had attempted to apply an understanding fishing effort in each area. They indicated that they would accept the GSSA boundary on the northern line but would still want to look at buffers to see how consistent they are around cells of importance for corals. Another NGO coalition member/Ecosystems advisor indicated that the issue of a consistent buffer was important to their group, and that drawing the northern side boundary while maintaining a 0.2 nautical mile buffer from the high habitat suitability areas would come closer to the GSSA line than to the NGO line.

An FMAT member reiterated that the FMAT boundaries were based on 0.4 nautical mile buffer, and that buffer was open for discussion. Both the habitat suitability model outputs and areas of high slope were buffered by this distance, which was chosen based on the data with poorer resolution (the habitat suitability model). FMAT representatives were comfortable reducing the buffer from high slope areas. The slope data are much higher resolution compared to the habitat suitability model.

Another NGO coalition member agreed with previous comments regarding finding consistent methodology for determining buffers and drawing lines, stating that there needed to be a defensible explanation for all of the lines. If the Council comes down to any agreed upon lines, they would still have to justify this in a defensible way that would stand up to law and potential challenger review.

Industry representatives stated that there must be compromises made on both sides, and that none of this can be done uniformly given that the importance and the effects of buffers are not consistent in each area. Each area is different in terms of importance to the industry and corals, and fine scale adjustments need to be made to account for this. On the concept of a standardized buffer, one participant asked for information on the average distance between a vessel and their net, or similar information to have a better understanding of what is needed to operate gear, in order to inform discussions of a buffer. In response, fishing industry representatives stated that nothing is uniform and both gear configurations and fishing techniques differ.

The discussion returned to compromising on both the northern and southern edges. Industry representatives indicated that they had already agreed to extend the boundaries out far to the east, extend the boundary at the head of the canyon shallower than necessary to protect corals, and had provided an adequate buffer in many areas. They had also agreed to a modification at one vertex on the southern edge to protect a spot of dispute.

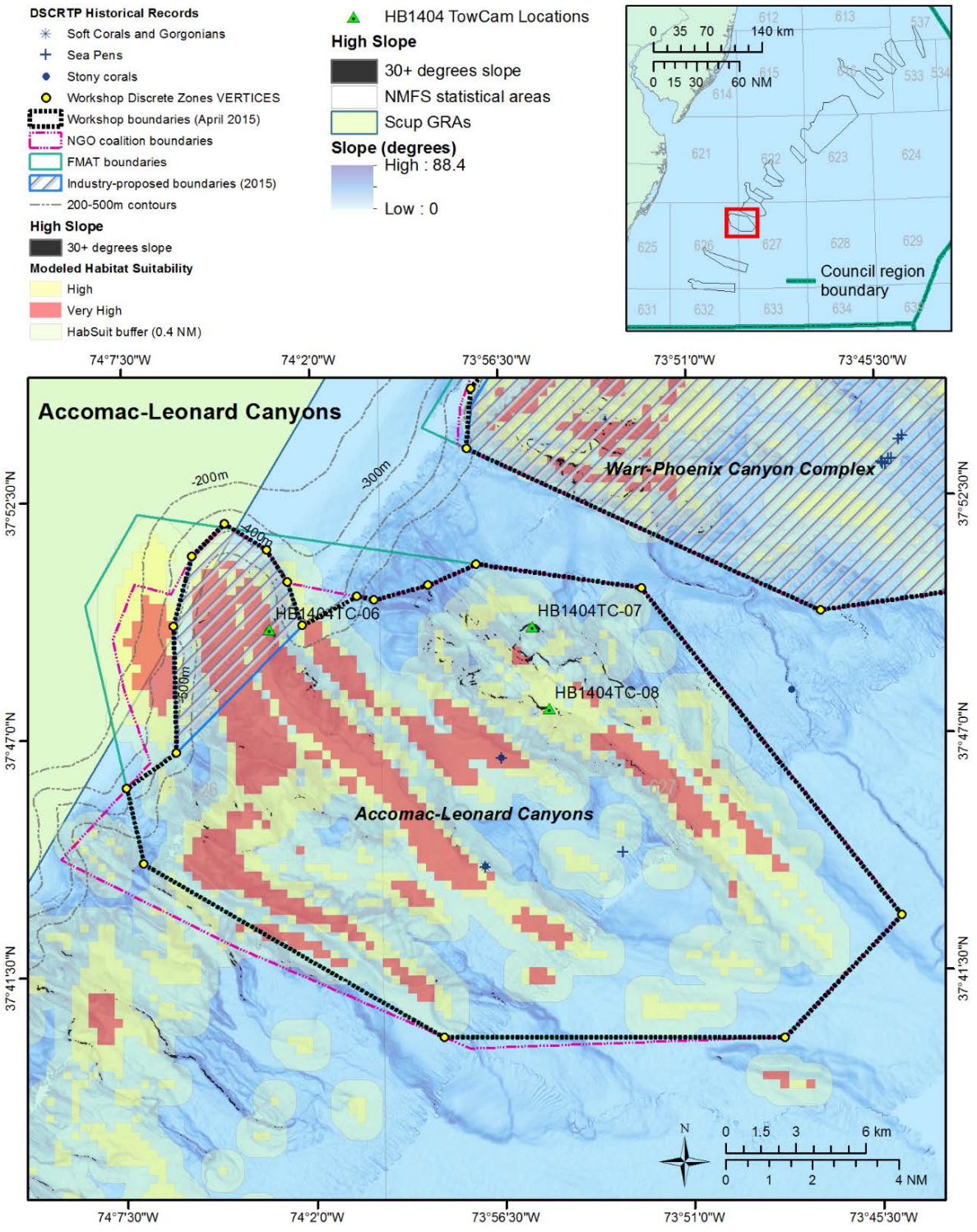
An MSB advisor pointed out the extraordinary nature of this process, and having industry members there showing where they fish and what they need to operate safely and without legal consequences. In addition, the proposals on the table still protect the overwhelming majority of model based habitat suitability. Although the model should be respected and used, the uncertainty associated with model hasn't been discussed, and neither has the economic value of these areas.

Industry ultimately agreed to move the southern boundary down to the NGO coalition line, on the condition that the northern boundary would follow the GSSA boundary.

A coral scientist noted again that for decisions on extremely fine scales, the focus should be on areas of high slope. An NGO coalition member noted a point where a small area of high slope wasn't covered by the GSSA lines and asked to modify the line. Industry representatives noted that they had already made many concessions, and now the focus of the discussion was on area less than 1% of the total discrete zone area. They noted that the compromises were appearing to be one-sided.

Participants agreed to leave the boundary as previously discussed: with a southern edge following the NGO boundary, the northern edge following the GSSA boundary, and eastern boundaries following the FMAT boundary.

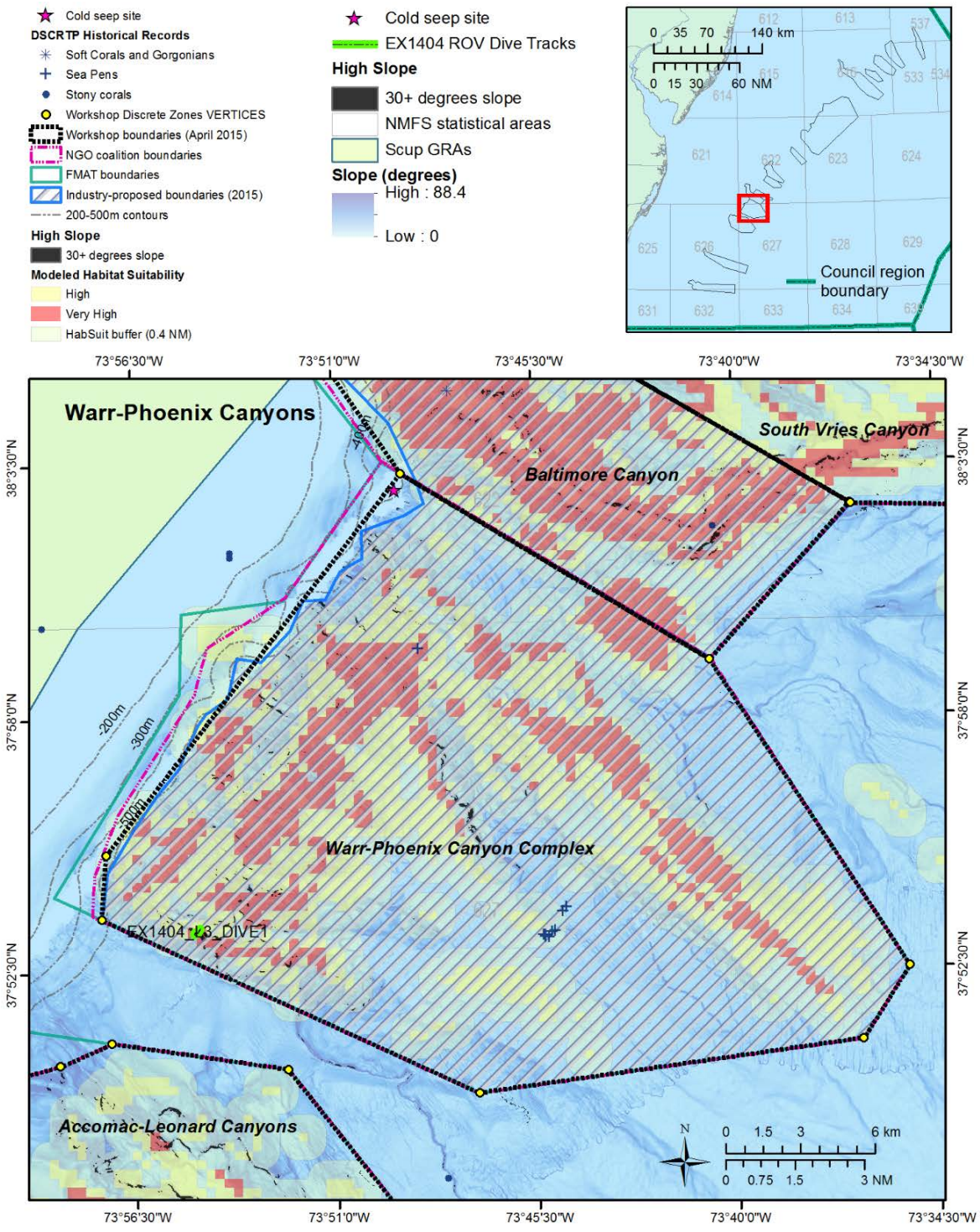
Accomac and Leonard Canyons



In Accomac and Leonard Canyons, the NGO coalition boundary extended further in the southwest corner than the FMAT boundaries, but participants agreed to follow the FMAT boundaries here. Industry representatives again agreed to extend the eastern boundaries out to follow the FMAT boundaries.

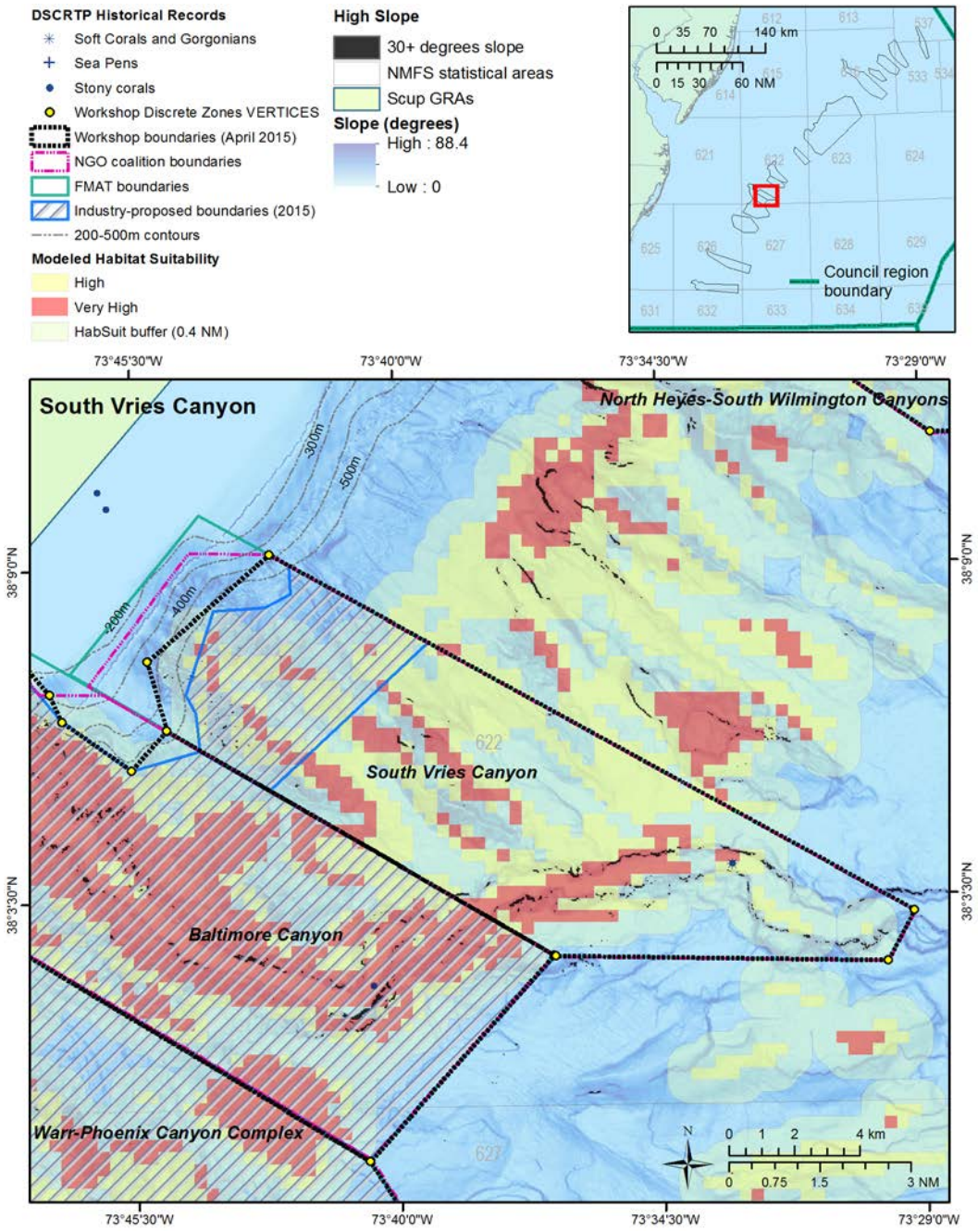
On the northern boundary, participants agreed to draw a boundary following the GSSA line around the head of the canyon, and then extend it straight out to meet the NGO coalition line. From there, the line follows the FMAT boundary all the way around the eastern and southern edges.

Warr and Phoenix Canyons



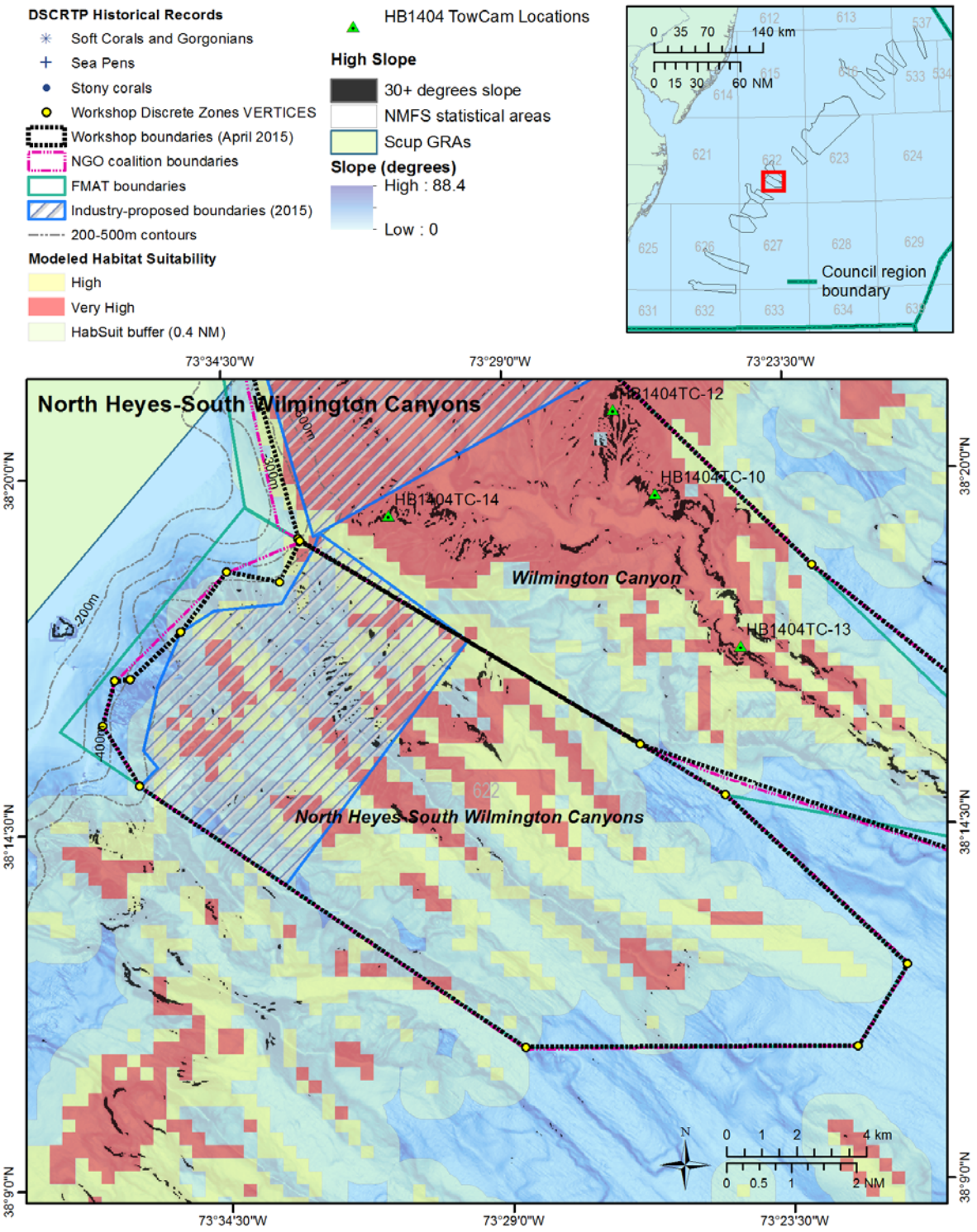
The western (landward) boundary of Warr and Phoenix Canyons was the only boundary that differed between the three proposed sets of boundaries. Because the differing boundaries were relatively close together and did not differ significantly in coral protections, there was not extensive debate on which to follow. The discussion focused on simplifying the boundary, and consensus was reached to draw a straight line from the NGO boundary in the southwestern corner, across areas of high slope until the line intersected the proposed edge of Baltimore Canyon. This boundary also encompasses a unique methane cold seep location discovered during the BOEM research survey, which was located near the northernmost corner of the canyon complex, near Baltimore Canyon.

South Vries Canyon



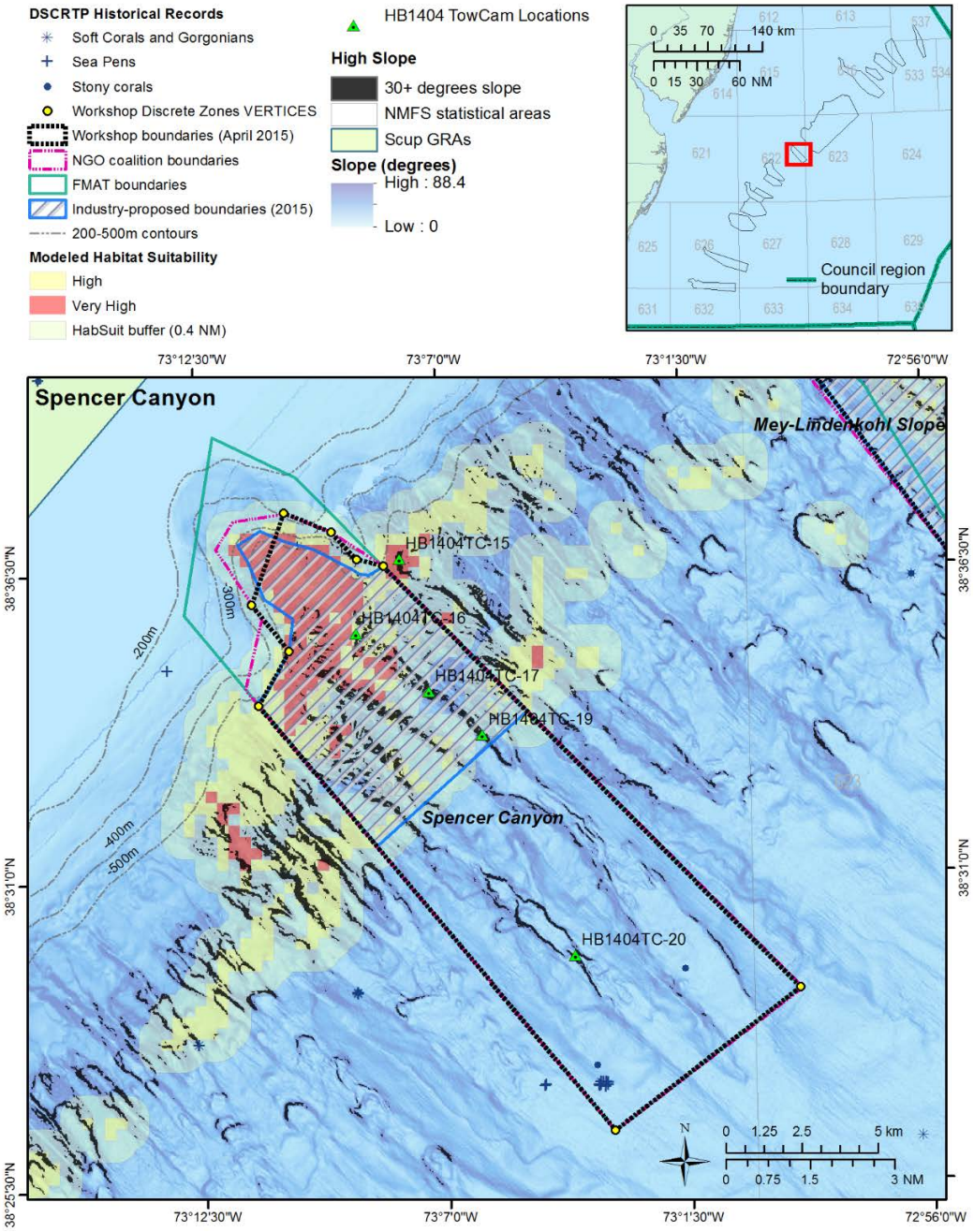
The group went next to South Vries Canyon. Again industry representatives agreed to extend the eastern boundaries to follow the FMAT/NGO coalition boundaries. On the landward boundary, participants agreed to compromise between the GSSA and NGO boundary after it was pointed out that a strip of "high slope" area encompassed by the FMAT's landward boundary was an artifact of the slope dataset, originating from the process of stitching together multiple bathymetry datasets (referred to as a "seam"). Although these artifacts are relatively uncommon, they were noted in several locations, mostly in shallower areas and typically in small patches or thin lines. Several seams were pointed out throughout the workshop discussions, sometimes by fishermen familiar with the terrain in these areas and questioning the accuracy of the slope data, and sometimes by scientists familiar with the bathymetry data. Seams are typically easily identifiable by their linear nature and direction opposite the axis of the canyon, and were able to be confirmed by zooming in on the bathymetry data. The landward boundary agreed upon by participants encompassed areas of high slope and predicted high habitat suitability with a small buffer in most areas, while staying below the 200 fathom contour, as requested by industry.

North Heyes and South Wilmington Canyons



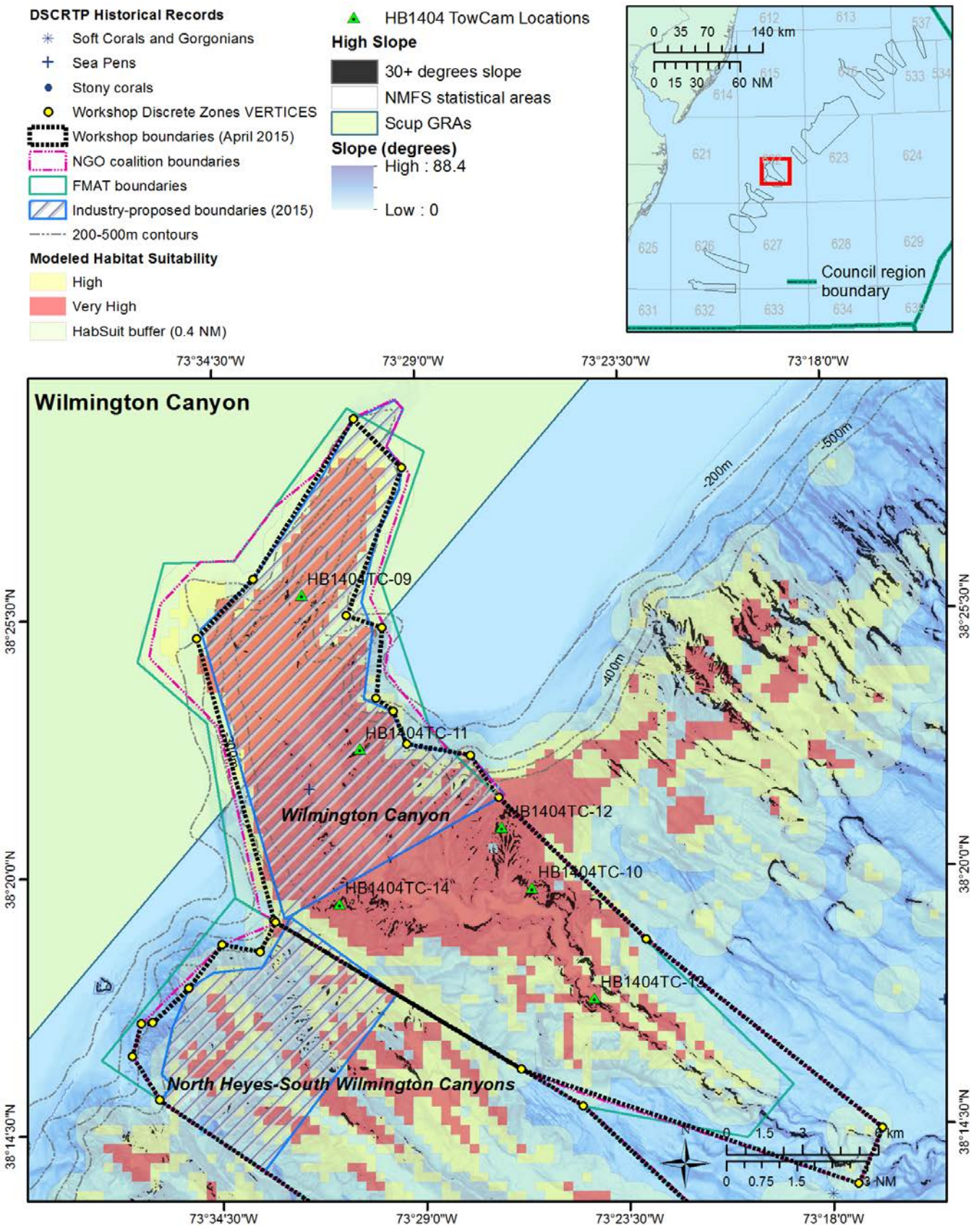
The group moved to North Heyes and South Wilmington Canyons. Again, the industry representatives agreed to extend the eastern boundaries to follow the FMAT/NGO coalition boundaries. Participants agreed to a modified landward boundary that initially follows the NGO coalition boundary, extends down to the GSSA boundary and then back up to the NGO boundary, encompassing most areas of high slope. Industry representatives indicated that the bight area for Wilmington Canyon, on the northern corner of this proposed area, is an important operating area for many fishing vessels, which is reflected in the way the boundary drops down in this area.

Spencer Canyon



At the end of the first day, the group moved to Spencer Canyon. Although there was a TowCam dive outside all of the proposed boundaries, no corals were observed in the images analyzed from that dive. Industry representatives again agreed to extend the boundaries to the southeast to follow the FMAT/NGO coalition boundaries. One participant asked to look at the observer tow data, which showed many lines across the head of the canyon. However, it was again pointed out that these were not vessel tracks but straight lines drawn between observed haul start and end locations. After some discussion of the landward boundaries, the group agreed to draw the lines in a way that captured most of the high slope areas toward the head of the canyon. An NGO coalition member asked why the industry was proposing (during the discussion) to cut off some of their original boundary, and an industry representative responded that it had simplified the line but also encompassed more areas of high slope. The NGO participant asked for scientists' perspectives on cutting off part of the predicted high habitat suitability area in the head of the canyon, and the response was that given the resolution and the lack of high slope areas here, that excluding this small portion was acceptable.

Wilmington Canyon



The group discussed boundaries for Wilmington Canyon at length. This is a very economically important canyon for the squid industry, and there were many operational considerations for the group to take into account. Industry representatives noted that accepting the NGO coalition boundary would mean putting squid vessels in jeopardy. The bights of Wilmington Canyon are a crucial point in the *Illex* fishery, and small adjustments to closed areas could make the difference between profitable and unprofitable trips. Others pointed out again that the nets are not going to hitting the bottom in these areas, but these bights are crucial areas from an operational perspective in terms of setting and hauling gear. The nets are not going to be a problem in these areas, but the boat will not be where the net is, and if these areas are to be enforced based on boat position, they need these areas to operate successfully.

Brian Kinlan (NCCOS) noted again that the group should focus on buffering from the areas of high slope, not necessarily the red (very high habitat suitability) areas. Particularly, the focus should be on high slope areas within the red cells. An NGO coalition member responded that this differs from the methodology used by the FMAT, in which they buffered high and very high habitat suitability by two model grid cells (~750 meters). The point of discrete zones, he noted, is not to provide for all tows by all fishing vessels. The NGO coalition boundaries have been cut back significantly from the FMAT boundaries based on observed fishing effort data.

Industry representatives stated that they had offered a lot on this canyon by extending boundaries northward and out to the east, which results in protection of the vast majority of corals and suitable habitat in the canyon. They did not see much room for further negotiation. The issue of vessel position vs. gear position was reiterated: in order to fish, the vessel has to be on or near these lines. The net is not in this location, but the boat has to be to get the net where it needs to be. Squid nets used in the current fishery are now more semi-pelagic than bottom trawls, and they rarely touch the bottom. What the industry is fighting for in these discussions in less than a percent of the total area.

In the interest of moving the discussion along, the industry representatives considered any areas where they may have operational flexibility. Again, fishing industry participants discussed how these bights of these canyons are absolutely the most critical areas for industry, in particular for canyons like Wilmington.

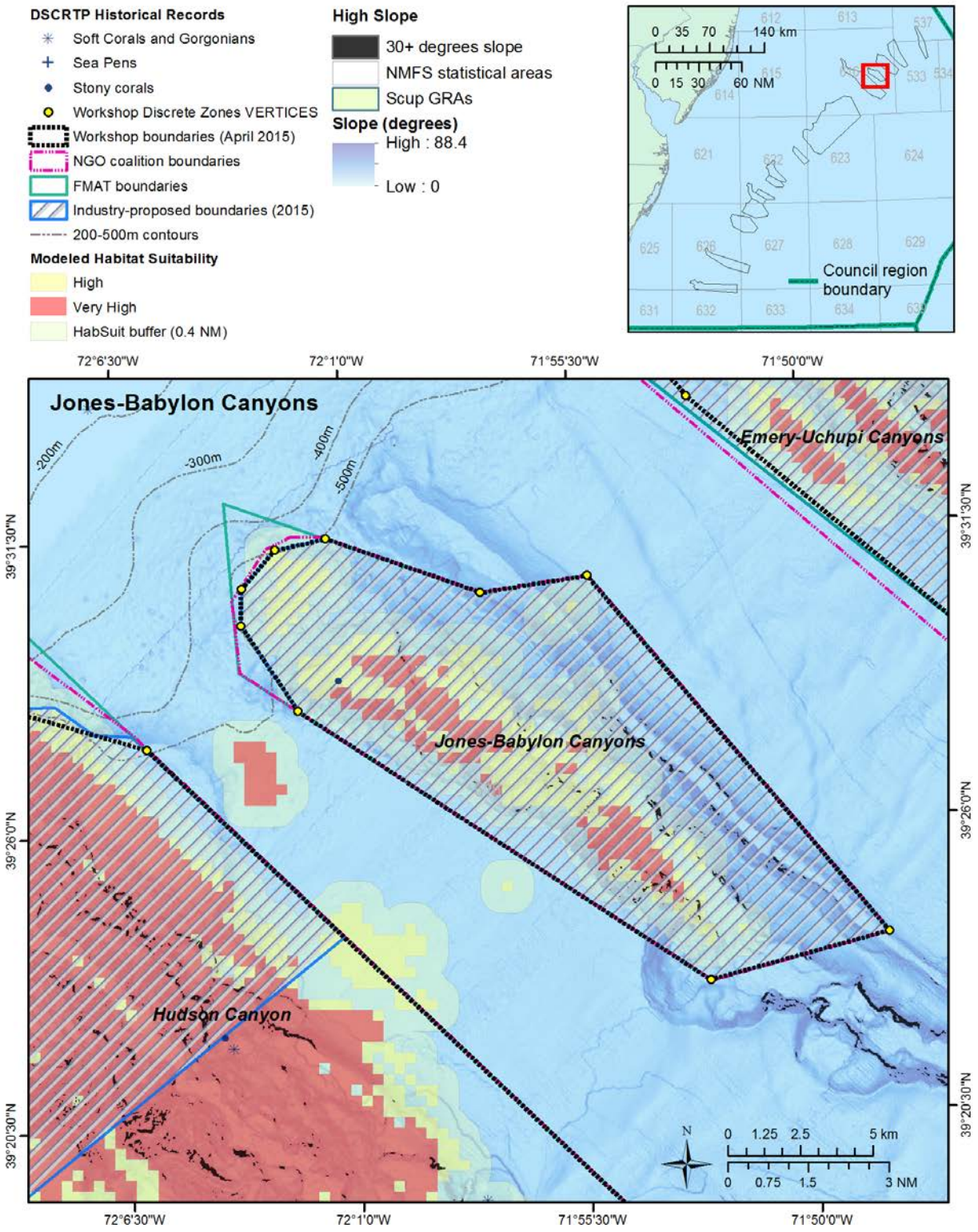
After discussions of compromise stalled at multiple points, NGO coalition representatives noted that perhaps the decision would be best left to the Council as the group was struggling to come to a compromise on many areas of this canyon. They indicated that the GSSA boundary did not meet the NGO coalition's minimum standards for coral protection. In response, industry representatives attempted to revise the boundary in one additional attempt at negotiation. To start, on the west side, the distance between the NGO and GSSA boundary proposals was split. From there, the line was drawn to follow the GSSA boundary to the northern most portion of the canyon.

An NGO coalition member noted that from their group's perspective, they came in with a proposal for compromise between the FMAT and GSSA boundaries, and they viewed additional tweaks as a compromise from a compromise.

On the northern side of the canyon, an industry representative noted that the piece of bottom that was under discussion is absolutely critical to their operation in the squid fishery. The shape of the canyon naturally protects coral. Making extremely small decisions on the line here could dramatically affect revenue.

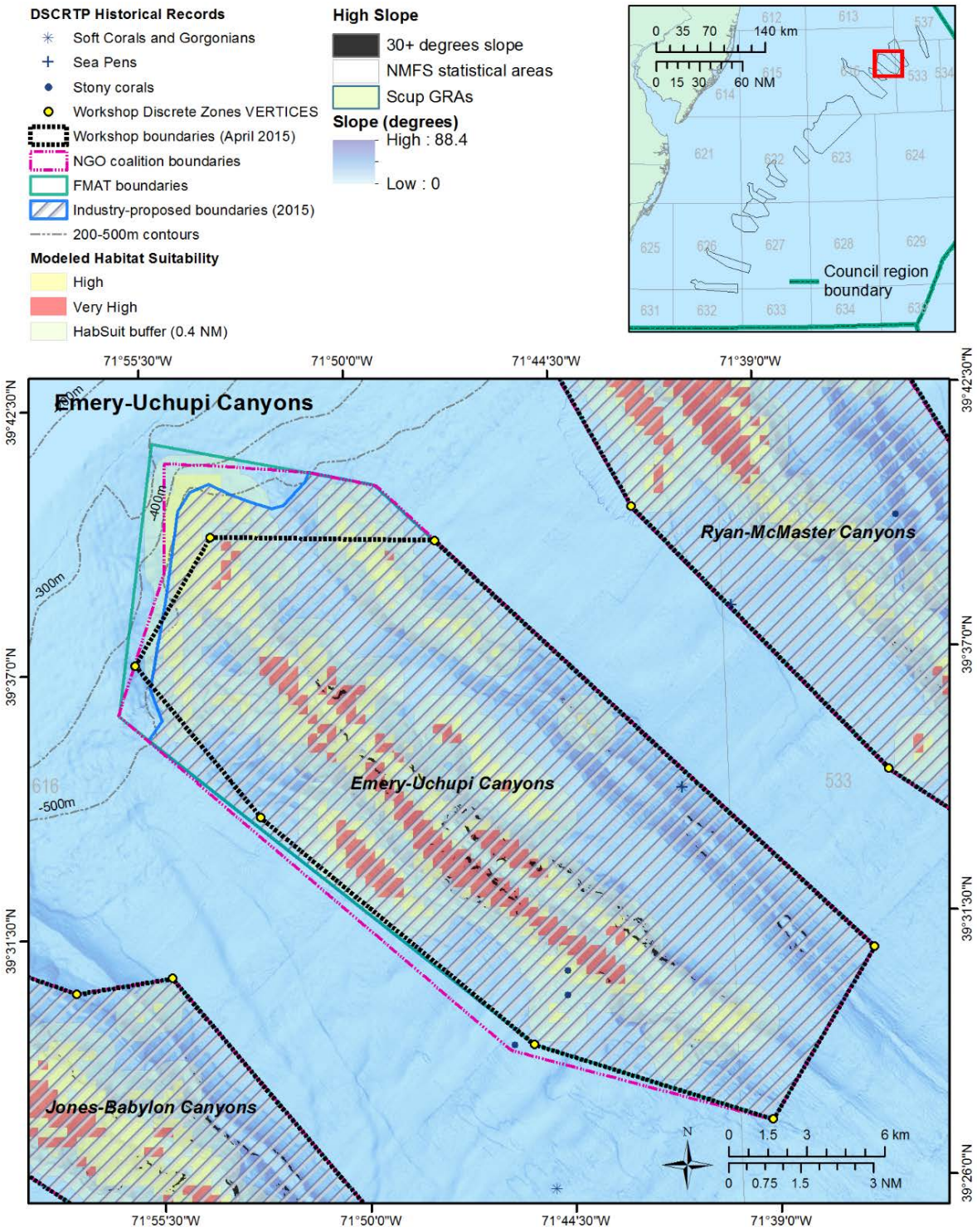
Several participants made proposals to move points on the northern edge, resulting in extensive back and forth discussion on this edge until the group was satisfied with the modifications. Finally, participants agreed to cut off the top of the canyon (where there is no predicted high habitat suitability) for the sake of simplicity and ease of enforcement. It was also agreed to follow the NGO boundaries on the eastern edge.

Jones and Babylon Canyons



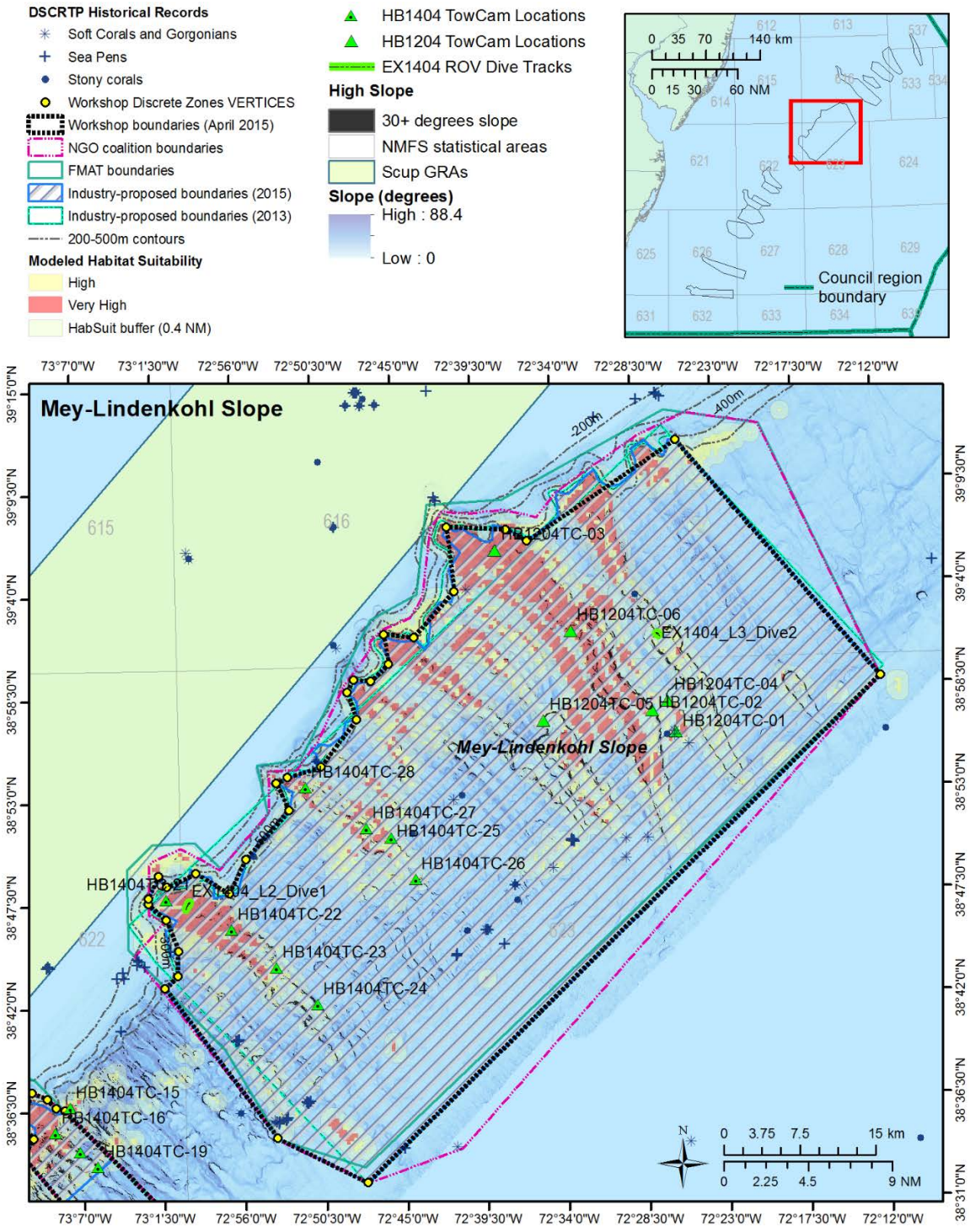
For Jones-Babylon Canyons, NGO coalition representatives offered that they were comfortable with the GSSA boundaries. There was no opposition to following the GSSA boundaries for this area.

Emery and Uchupi Canyons



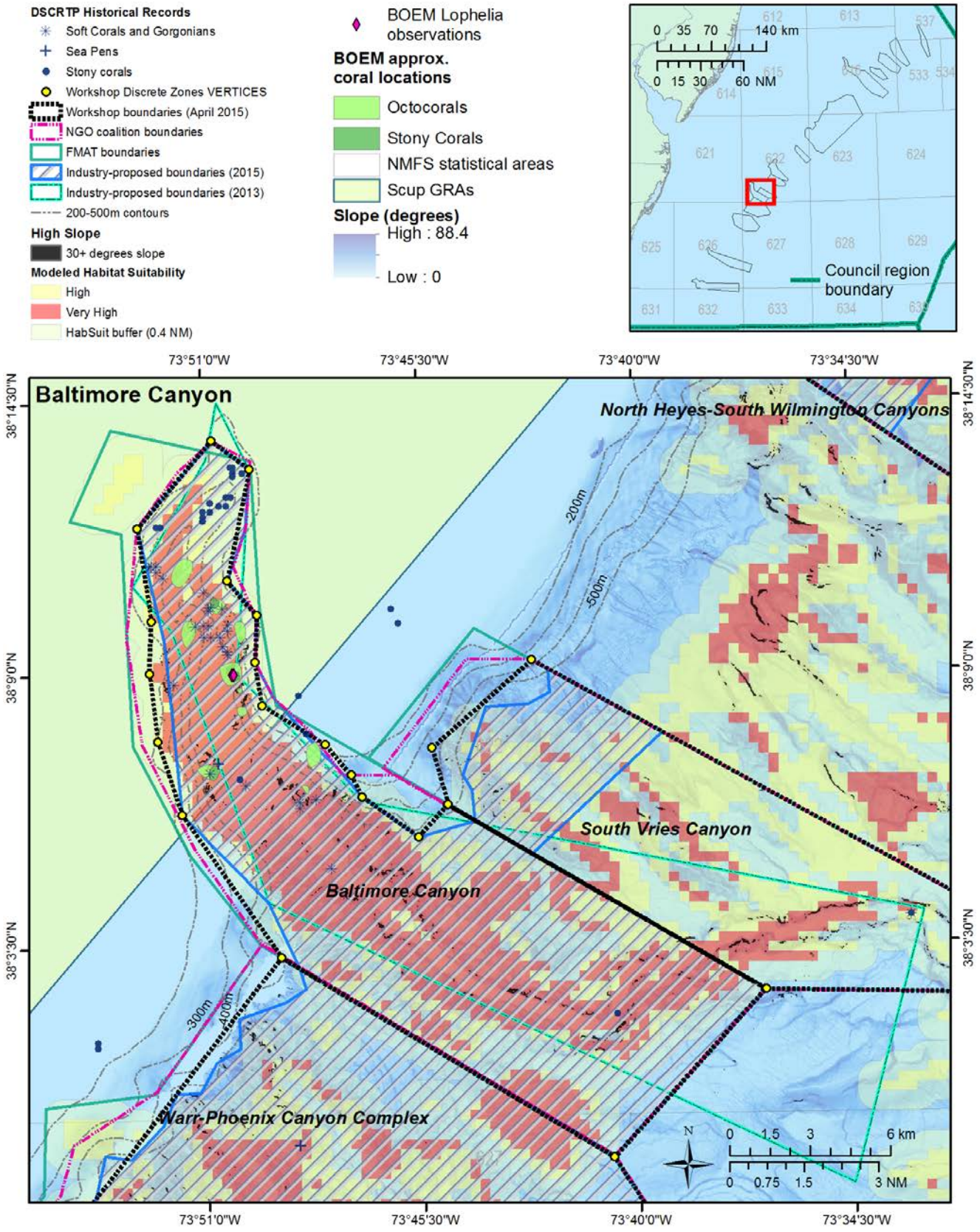
For Emery and Uchupi Canyons, discussions centered around the landward boundary. It was noted that other fisheries (monkfish and others) start to come into play more prominently in these northern areas, and there is a lobster GRA near here that should also be considered. For this reason it was suggested that the landward boundary stay below the 500 meter depth contour as much as possible. It was noted that the GSSA boundary is complex and could be simplified. As the group broke for lunch, a subset of participants finished the boundary proposal for this canyon, which was reviewed and approved by the full group of participants when they reconvened.

Mey-Lindenkohl Slope



The Mey-Lindenkohl Slope is notable for having many records of observed corals, both historical and from recent surveys. The group began discussions in the southern corner of the landward boundary, and moved point by point across this edge, negotiating a compromise on each segment. Fishing industry participants noted that this area was complex in terms of identifying key areas for fishing effort, and it was important to spend time on this area to arrive at an acceptable border. After lengthy discussion of this boundary and arrival at an acceptable compromise, the group agreed to follow the GSSA boundaries around the eastern and southern edges.

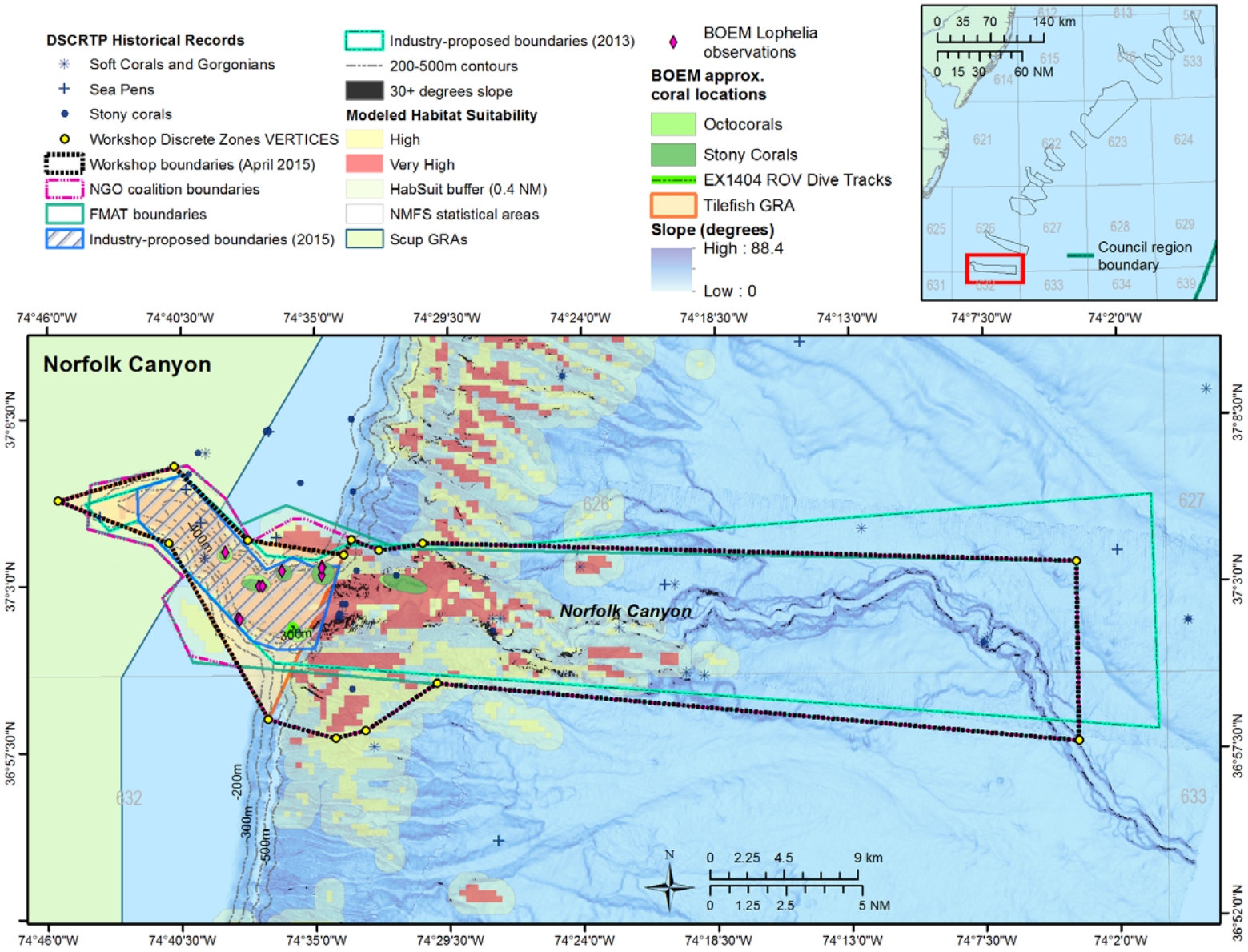
Baltimore Canyon



The group considered the previously drawn workshop boundary for Warr-Phoenix Canyon and agreed to align the southwestern boundary with the northern boundary of Warr-Phoenix Canyon. The discussion then focused on the western boundary. Coral scientists indicated that in Baltimore Canyon, abundant and diverse colonies of coral have been observed, typically at 350 meters or deeper. It was requested to shift this western boundary to the NGO coalition line, but industry representatives indicated that this would be too far out and would negatively impact fishing operations. Participants agreed to compromise here by drawing a straight line between the intersection with Warr-Phoenix Canyon up to the GSSA line. Industry representatives indicated that this line is not ideal but they can live with it. NGO participants noted that this is one of the canyons they feel most strongly about in terms of coral protections in terms of protecting what we know exists. The remaining portions of the western boundary were drawn in an attempt to encompass most high slope areas and predicted high habitat suitability, with input from fishermen on which areas were most critical to preserve for fishing operations.

At the head of the canyon, the group agreed to follow the GSSA boundaries, with one point removed to simplify the line while maintaining a buffer from areas of high habitat suitability. On the northern edge, a portion of the boundary was adjusted outward to encompass the location of coral colonies observed on the 2012 BOEM survey. The boundary along the canyon's northern bight was adjusted to increase flexibility for fishing vessels while encompassing very high predicted habitat suitability. This boundary was joined to the previously drawn workshop boundary for South Vries Canyon. From here, the boundaries followed the FMAT/NGO coalition, GSSA boundaries, which were identical between the three groups.

Norfolk Canyon

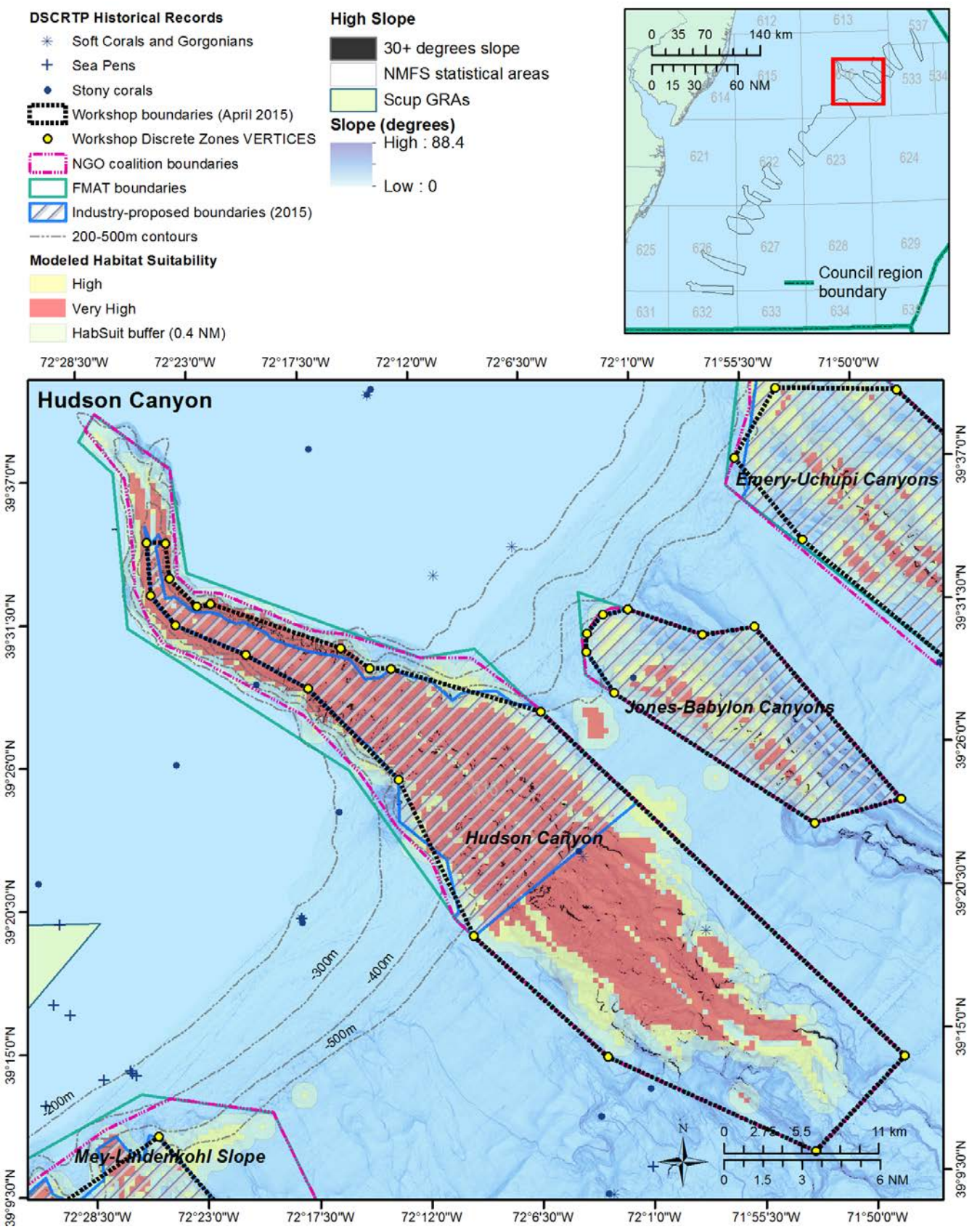


Discussions for Norfolk Canyon began with the question of whether or not the boundary at the head of the canyon should follow the current Tilefish Gear-Restricted Area (GRA), in which the use of bottom tending gear is prohibited. Initially, industry representatives did not wish to incorporate the Tilefish GRA boundaries, stating that these represented separate actions for separate purposes and should not be combined. In the future, if changes to the Tilefish GRA were desired, it would complicate things to have an aligned discrete coral zone. Some industry members felt that the Tilefish GRAs were not necessarily drawn correctly in the first place and should eventually be re-evaluated. Rick Robins noted that any future review of the Tilefish GRAs would be a thorough review throughout the entire management unit.

Industry representatives agreed to extend the eastern/seaward boundaries out to match the FMAT/NGO coalition boundaries where they aligned, with some discussion was had about whether to adopt the portion of the NGO coalition boundaries that jut out to the south, in order to encompass some areas of high predicted habitat suitability and slope. It was agreed that the boundary would follow the NGO coalition boundary here.

After some back and forth regarding the boundaries at the head of the canyon, the full group took a break and several participants continued discussing Norfolk Canyon. When the group reconvened, it was agreed to by the full group that the landward boundaries of the coral discrete zone should follow the Tilefish GRA boundaries. The group then discussed where to connect the boundaries from the GRA boundary to the rest of the proposed boundary. It was determined that the line should follow the Tilefish GRA, then follow the NGO coalition boundaries on the southern side, all the way around to the northern edge. On the northern edge, the group agreed to extend the line from the corner of the Tilefish GRA straight out to the NGO coalition boundary.

Hudson Canyon



In Hudson Canyon, industry representatives agreed to extend the eastern boundaries out to align with the FMAT/NGO Coalition boundaries where they overlapped. The group discussed the extensive fishing effort in and around Hudson Canyon for multiple fisheries, including deeper water fisheries for whiting and monkfish. Industry participants requested that the boundaries be maintained below 500 meters depth. Economically, this was identified as the most valuable mid-Atlantic canyon.

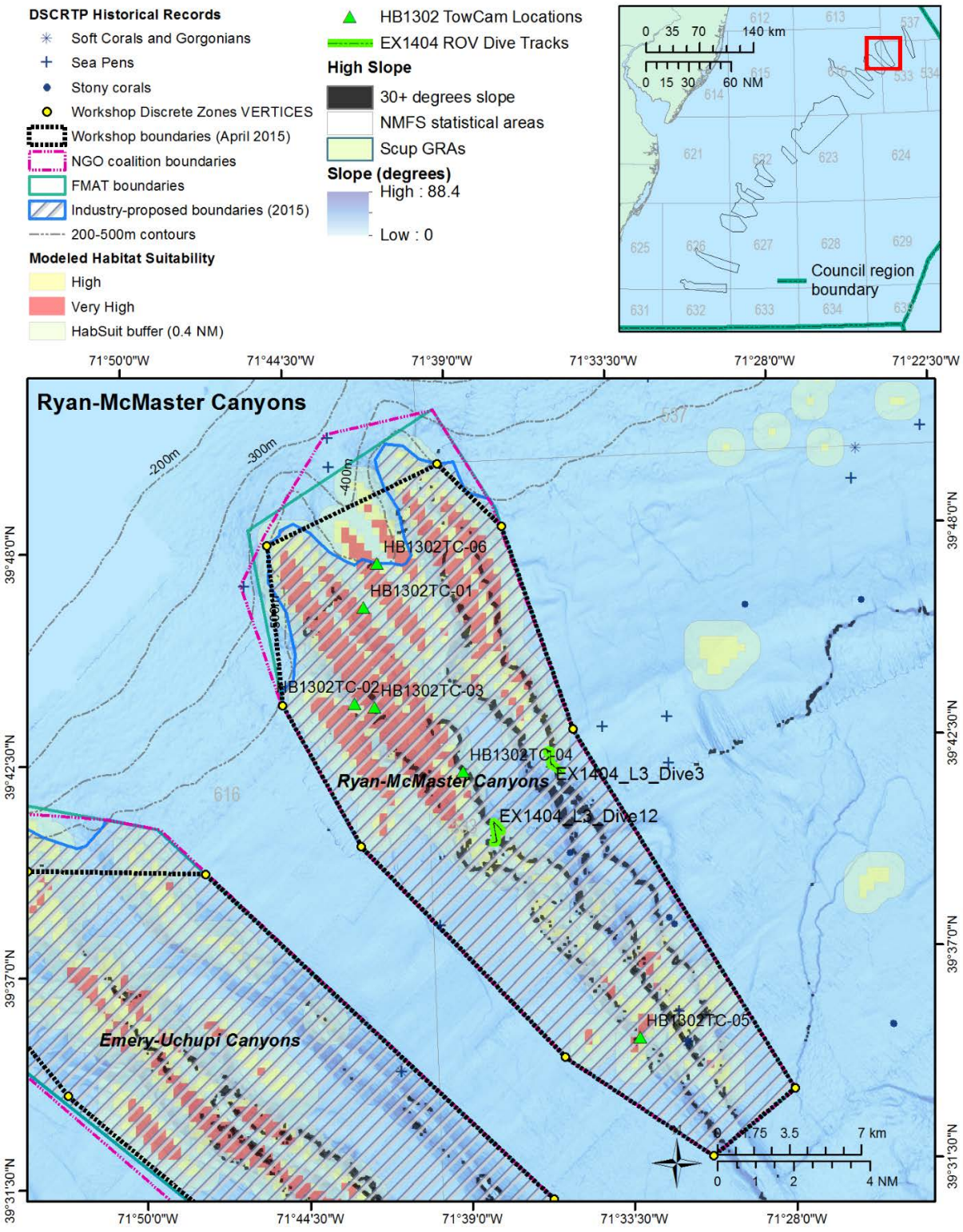
The group also discussed the ecological aspects of this canyon and the conservation value for coral. Areas of high slope and hard substrate are known to exist in Hudson Canyon. However, it's a relatively muddier canyon compared to other areas, and there are likely to be large areas that are not prime habitat for corals. Surveys for deep sea corals have been limited, although solitary cup corals have been observed. Coral scientists suggested focusing on the areas of high slope along the northern edge, where coral communities are most likely to be observed if they exist in Hudson Canyon. NGO coalition representatives requested to work with the GSSA line to try to straighten it out in places where it was very complex.

On the southern boundary, industry representatives requested that the line be kept below the 500 meter contour. The lines were simplified as much as possible on this edge.

Enforcement issues were raised regarding the narrowness of the area toward the head of the canyon, where the distance across the proposed boundaries were very small, particularly for the GSSA boundary. To simplify the proposed GSSA boundary, a line was drawn straight across at the top of the proposed area, and was extended slightly to encompass some patches of high slope. On the northern edge, the line was drawn to stay near the 200 fathom contour, but also to encompass the areas of high slope on the northern edge that the scientist participants noted as likely to be important for corals.

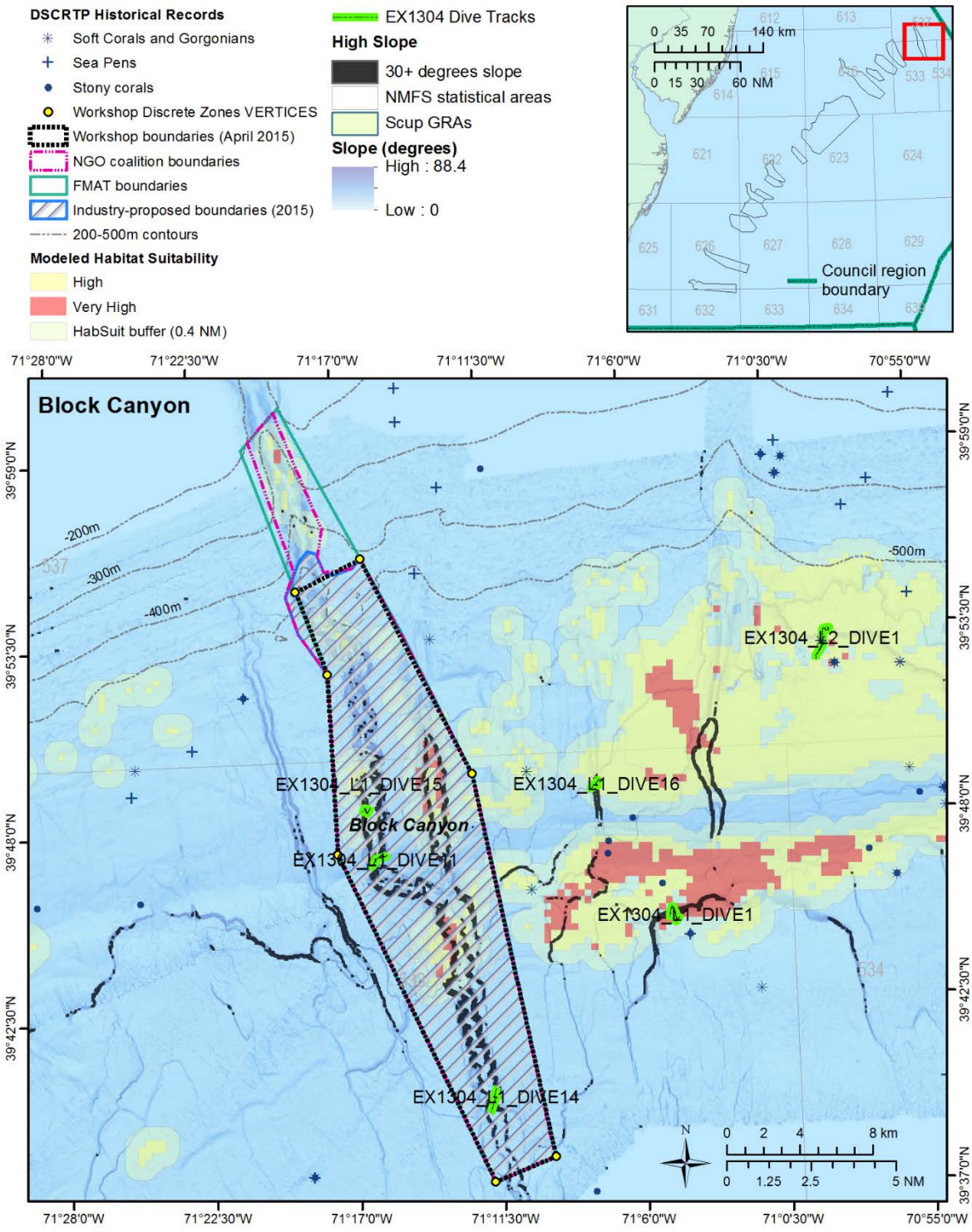
Some participants wondered whether Hudson Canyon should be a priority for protection at all, given the tremendous economic importance and the relative lack of coral observations or known importance for corals. There was some reluctance to agree to a workshop boundary for this area. Staff noted that the Council may or may not choose not to designate Hudson Canyon as a discrete zone, but that a workshop boundary should be drawn to give the Council the best range of options should they choose to move forward with protections in this area.

Ryan and McMaster Canyons



All three boundary proposals aligned for Ryan and McMaster Canyons along the southeastern (deepest) boundary. Modifications were proposed that would extend from the point of divergence on the western boundary up to the GSSA line, and then move straight across, encompassing most areas of high predicted habitat suitability and high slope. On the northeastern boundary, the line was extended straight down to the intersection of the three proposed boundary lines. This proposal was agreed to by the group.

Block Canyon



All three boundary proposals aligned for Block Canyon along the southern (deepest) boundary. The area where the boundaries differed in Block Canyon surrounded small cells of high predicted habitat suitability and high slope. The slope data was questioned and checked to be sure it was a real representation of high slope areas. Given high fishing activity at the head of this canyon and the relatively small areas of suitable coral habitat, it was agreed to exclude these small northern patches of habitat and slope. The northern boundary was simplified from the GSSA line by drawing a straight line across the FMAT proposed boundary.

Discussion of Amendment Exemption Alternatives

Workshop participants discussed proposed exemptions for coral zones, including the red crab fishery and the golden tilefish fishery.

Jon Williams, representing the red crab fishery, took a few minutes to explain the operation of their fishery. The red crab fishery currently consists of five boats with limited access licenses, managed by the New England Fishery Management Council. The fishery operates from Cape Hatteras to the US-Canadian border. Of the five limited access licenses, only three are active, and only three have been active for many years. The quota can be caught by those three boats, of which two fish full time and one fishes part time. They fish very differently than other types of fixed gear. They are the smallest fishery on east coast.

The crabs come to the traps quickly, and leave the traps quickly. Soak time is typically 24 hours. If the traps soak for 48 hours, they lose half of the crabs. As a result, they fish along the bottom very quickly. Fishing takes place in all of the proposed coral areas, as they fish targeting 350 fathoms (640 meters). The crabs show up at 200 fathoms and segregate by depth: there are predominantly females between 200 and 300 fathoms. Beyond 335 or 340 fathoms, there are only males. Below 350 to 370 fathoms, they get a mix. Since take of female crabs is prohibited, vessels target a very specific depth to get only males. This is a small ribbon of area that cuts through every one of the proposed zones.

The traps used are 4-foot conical traps, made out of webbing material. They have a soft bottom and weigh less than 40 lb in the water. There are 150 traps on one line, with a trap about every 150 feet. Each boat fishes 600 traps, and they haul each one daily. One boat fishes from Hudson Canyon to about 50-60 miles south of Norfolk. This vessel sees Hudson Canyon twice a year and Norfolk twice a year, basically making four passes per year. The other boat fishes to the Hague line doing the same thing, making four passes per year. The third boat bounces in between.

The big issue for the red crab fishery before the corals amendment was dealing with whale protection measures. Line interactions with whales are a huge issue for fixed gear fisheries, but the red crab fishery was exempted due to the depth fished, as whales don't feed at those depth. They are also exempted from sinking groundline regulations, since their groundline doesn't lie on the bottom, it floats. They use all float rope.

Given the way that the fishery operates, the vessels need to be directly on top of the gear to haul it up to make fishing at this depth practical. Dragging traps along the bottom doesn't work. They do not drag the gear around at all. They have been fishing this ribbon of depth (at 350 fathoms or 640 meters) for 42 years.

The red crab fishery is arguing for an exemption because 15 discrete zones are proposed, each of which they go through four times per year. To skip a zone, they would have to stack 600 traps, jump over the canyon, reset the gear, and start fishing again. This would essentially amount to re-starting the fishing season 60 times per year, which would be prohibitive to the industry. Jon also stated that the entire red crab industry fishes the same amount of traps as a single lobster boat.

The discussion continued with a question about monitoring in this fishery. In terms of monitoring, there are random observers and dockside sampling. This is not a VMS fishery.

An NGO representative commented that with the four major incised canyons (Norfolk, Washington, Wilmington, and Baltimore), workshop participants and others have worked hard to protect coral habitat. Some NGO coalition members would be interested in excluding those four areas from any exemption alternatives.

Several fishing industry participants indicated that gear restrictions should not be limited to one user group. If access is restricted, it should be restricted to everyone. The focus on mobile gear is misplaced. The discussion of fixed vs. mobile gear confuses people. The advantage of mobile gear is that they are driving the vessel, deploying the gear, and they know where it's going. Fixed gear means that is put in a particular spot, but it still moves due to storms, ships, getting lost, or other reasons. If the goal is to protect coral, areas should be closed to everything that could possibly have an impact on coral. Others agreed that it's not clear why one user group can get an exemption and another can't. Last year, only five boats participated in the *illex* fishery, so they are also a small fishery. The Council will have to examine these options and make the decisions. Red crab isn't the only fixed gear

type that could present a problem; the Council should look long and hard at lobstermen and other fixed gear such as sink gillnets.

Jon Williams responded that in watching the workshop process, there was concession after concession to reach a compromise. The problem with the red crab fishery, however, is that there is little room to move or to draw the areas differently that wouldn't impact these vessels, given the way the fishery operates at a very specific depth up and down the coast. If there were no red crab exemption, the proposals on the table would put them out of business. They wouldn't lose half of their income, it would make it not worth fishing at all.

An FMAT member asked whether the red crab fishery was setting pots primarily or exclusively on soft sediment. The response was that it depended on the captain, but there is soft sediment everywhere. The red crab vessels move their gear as fast as they can move it.

An NGO coalition member commented that habitat protection areas in the northeast were drawn with protection in mind, but then exemption after exemption was made for them to the point where they're almost meaningless. Corals are fragile, and the proposed coral areas should not have exemptions for anything. If the Council is serious about coral protection, they will keep gear out of there.

A Council member pointed that out that there may be a number of different ways to look at exemptions. The document offers a range of options, and it might be possible to look at them in a stepwise way: some canyons may be greater priorities for protection and the Council may consider applying exemptions differently to different areas.

Discussion of Transit Provisions

Workshop participants next discussed options for allowing transit through any proposed gear-restricted areas.

Multiple industry representatives noted that a transit-specific VMS declaration would not work well for the industry in the context of this amendment. Sometimes vessels cross five or six (or more) canyons in a day in search of fish or steaming. It would be a big burden to ask captains to switch a VMS declaration every time they cross a small canyon area and is not practical by any means.

The gear stowage provisions used for the groundfish closed areas are not practical either. These are applicable to vessels that stay relatively within the same area for multiple days. Industry representatives indicated that transit should be simple: if the nets are on the boat, they should be fine. They are able to be seen from aircraft. If it's on the boat, they are not towing. They can't deploy gear quickly to "sneak" in a tow. Setting the gear out and hauling it back are both 30 to 40 minute procedures. They jump over canyons all the time. Especially in the smaller proposed areas such as Hudson, they are going to leave the gear on the drum and jump across. The squid fishery is a daylight fishery and the crew needs to make every minute count. Another fishing industry representative pointed out that they already have multiple gear-restricted areas to deal with now, including scup and lobster GRAs. Lobster closed areas are already a problem as winds often blow them into closed areas. They do not need more areas off limits to transit.

A squid fisherman noted that a lot of coral is already protected by the way the *Illex* fishermen work, including the way that captains use their "snagbooks" and collective knowledge of hard bottom areas to avoid. Industry should be given credit for steering clear of it, and should not be subject to unnecessary transit burdens. Their transit is not impacting coral, and it's a waste of fuel to travel around these areas.