As shown in Figure 2 below, the workgroup's recommended integrated ABM index from October 2016 combined the EBS shelf bottom trawl survey, the GOA bottom trawl survey, and the IPHC standardized stock assessment survey, with the goal to combine them into a single integrated ABM index that can be used to guide the PSC limit. As shown in Figure 2, the workgroup intended the recommended ABM index to be a combination of the three indices which would result in one ABM index to which a control rule would applied to determine the PSC limit. The recommended index did not establish different weights for the three indices (i.e., each index has a weight of 1) because there is no scientific basis for differential weights and the weight given to each index is a policy determination for the Council.



Figure 2. Schematic of the framework laid out and presented at the October 2016 Council meeting; weights for each index were set equal to 1 ($b_k = 1$ for all k) in materials presented at the October 2016 Council meeting.

At the October 2016 meeting, the Council, SSC and stakeholders identified two primary concerns with the workgroup's recommendation for an integrated ABM index:

- combining three indices with different types of information lacks transparency and is difficult to interpret. Also it is unclear how tradeoffs among multiple, potentially conflicting objectives, could be addressed, and
- the index would likely have been ineffective at constraining PSC during the recent period of decline in coastwide halibut biomass. The ABM index combines a coastwide abundance index of large halibut from the IPHC survey with trawl survey indices of smaller halibut caught in the EBS and GOA trawl surveys. The SSC notes that equally weighting the two trawl-based indices may implicitly put more weight on halibut in the GOA.

The SSC suggested that the Council may need to consider different indices to meet different objectives, which could then be combined in a control rule or decision making framework that allows the Council to evaluate the tradeoffs between protecting spawning stock biomass, constraining PSC, and providing opportunities for a directed fishery.

The SSC suggested that the multiple objectives of the proposed action may require multiple indices, each with its own control rule (reflecting coastwide spawning biomass, encounter rates with the fleet, and availability to the directed fishery, respectively) that allow an evaluation of the tradeoffs between PSC,