What to do with Other Species, and some thoughts on meeting MSRA requirements in Alaska

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overview

1) NPFMC stock classification overview

2) new NS guidelines for stock classification and complexes

3) alternatives for NT/complex management

4) vulnerability analysis examples

NPFMC stock classification

groundfish FMPS have five species groups:
  a) target species
  b) prohibited species
  c) other species
  d) forage fish
  e) nonspecified species

multiple complexes (e.g. other rockfish, shallow-water flatfish)

- squids
- octopus
- sculpins
- sharks
- skates

1) directed fishing prohibited
2) 2% of target species MRA
3) processing limited to fishmeal

BSAI other species group

- squids → separate SDC for all squid species combined

- octopus

- sculpins

- sharks

- skates

OFL and ABC calculated for each species group

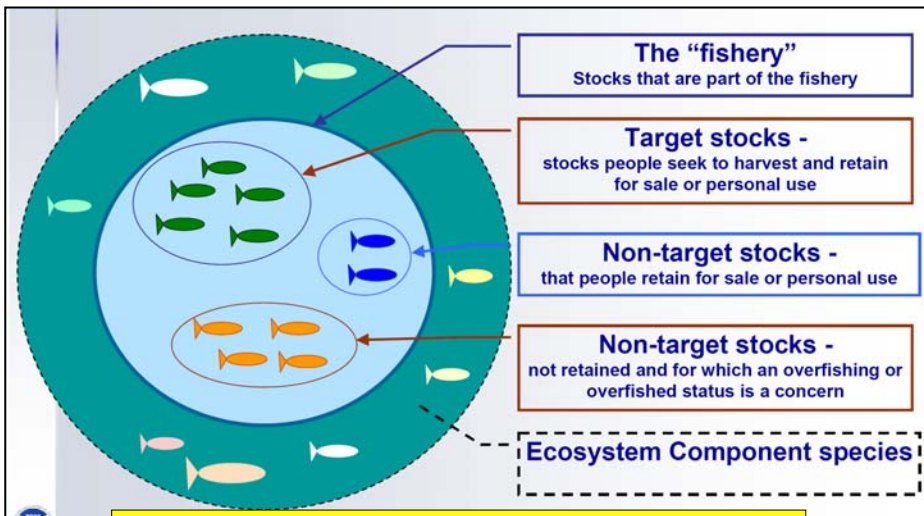then combined to create a single OFL, ABC, TAC for the Other Species group

GOA other species group

- **squids**

- **octopus**

- **sculpins**

- **sharks**

as of 2008, same approach as BSAI (previously OS TAC was ≤ 5% of combined groundfish TACS)

- **skates**

separate SDC for: big skates, longnose skates, other skates

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classification of stocks

The "fishery"
Stocks that are part of the fishery

Target stocks -
stocks people seek to harvest and retain for sale or personal use

Non-target stocks -
that people retain for sale or personal use

Non-target stocks -
not retained and for which an overfishing or overfished status is a concern

Ecosystem Component species

• EC category is optional and originally intended to accommodate species in existing FMPs that do not require SDC
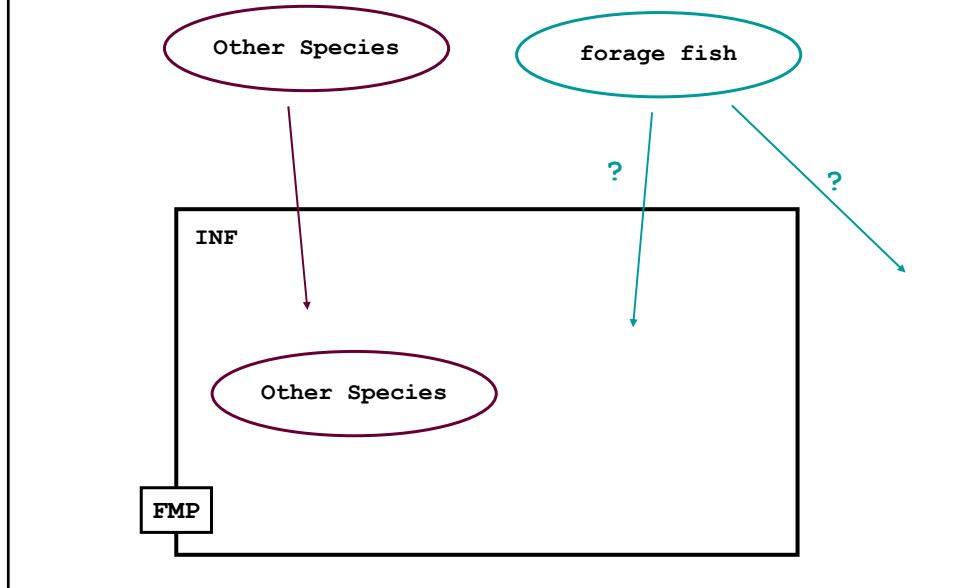
NS for stock classification

1) "in the fishery" vs. ecosystem component

2) nontargets: incidentally caught, may or may not be retained

3) EC: not likely to be overfished in the absence of conservation measures

4) EC: not generally retained (but may be occasionally)

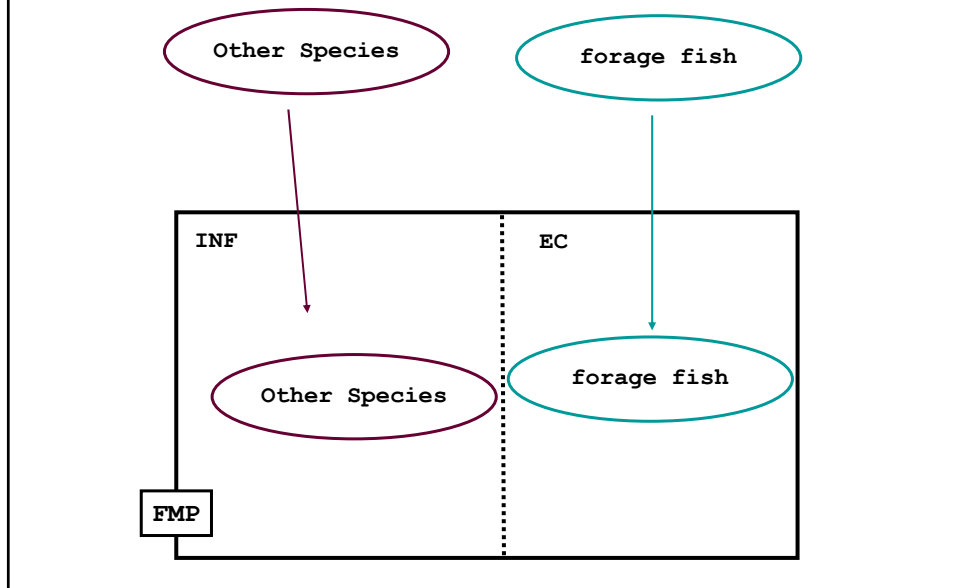5) councils should consider measures to minimize EC bycatch and protect EC ecosystem role

NS for complexes

1) species in complexes should be similar in:
      - geographic distribution
      - life history
      - vulnerability to particular fisheries

2) complexes may be managed as:
      - indicator stock(s) w/ separate SDC & ACL
      - single SDC & ACL for entire complex
      - indicator stock(s) w/ separate SDC but
            single ACL for complex

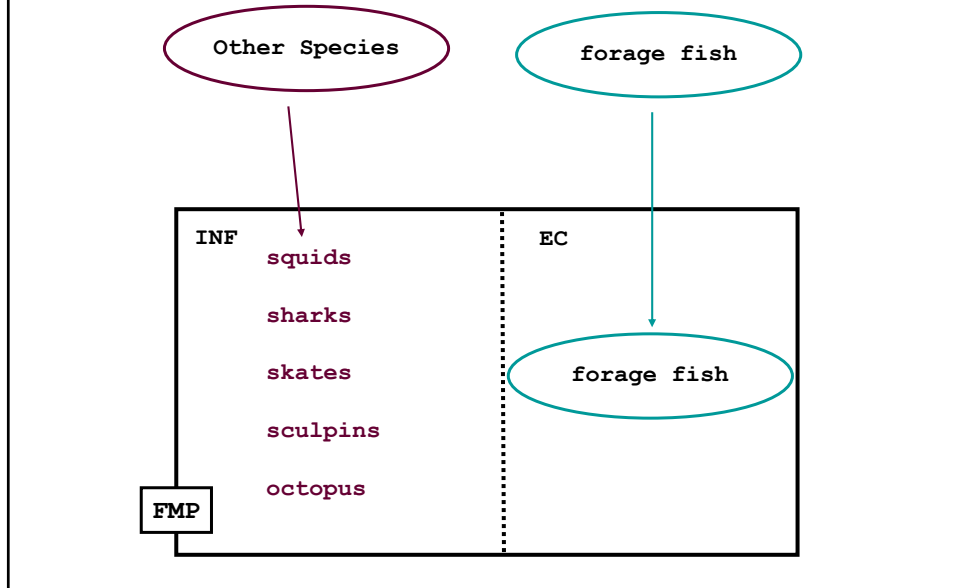3) indicator stocks should be "representative" of
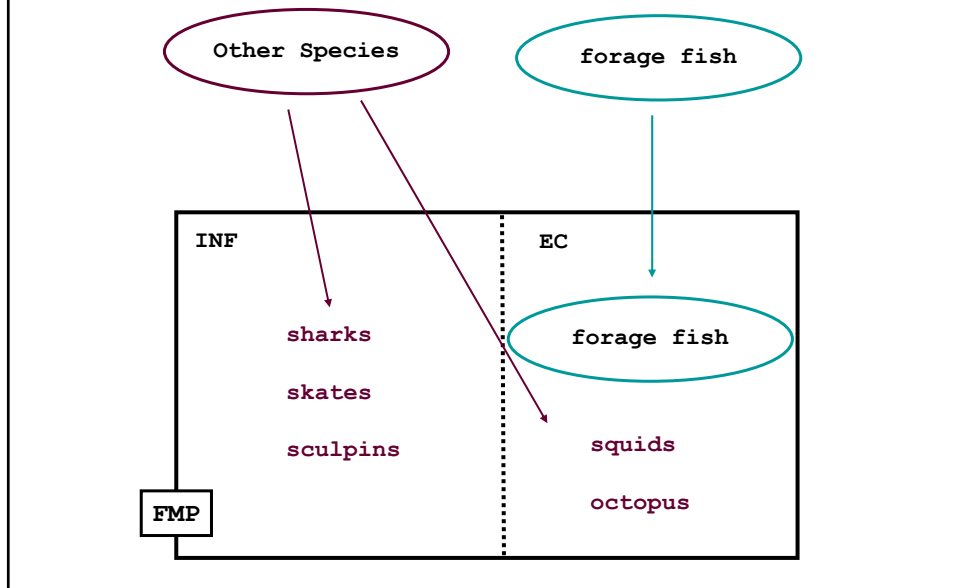   complex

option 1: no EC, OS as 1 complex

Other Species
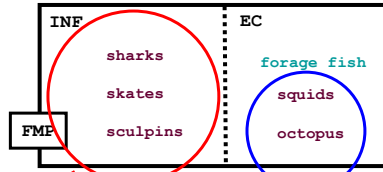
forage fish

INF

?

?

Other Species

FMP

option 2: EC, OS as 1 complex

Other Species

forage fish

INF

EC

Other Species

forage fish

FMP

option 3: separate OS "in the fishery"

Other Species

forage fish

INF

EC

squids

sharks

skates

sculpins

octopus

forage fish

FMP

option 4: some OS → EC

Other Species

forage fish

INF

EC

sharks

skates

sculpins

forage fish

squids

octopus

FMP

options for INF and EC management

INF		EC
FMP	sharks skates sculpins	forage fish squids octopus

- SDC for entire group?
- indicator species?
- separate complexes?

- monitor only?
- MRAs?
- catch "trigger" for re-evaluation?

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what does EC classification imply?

- EC doesn't require additional protection, but neither does it discourage it (i.e. the NPFMC can apply management measures to EC)
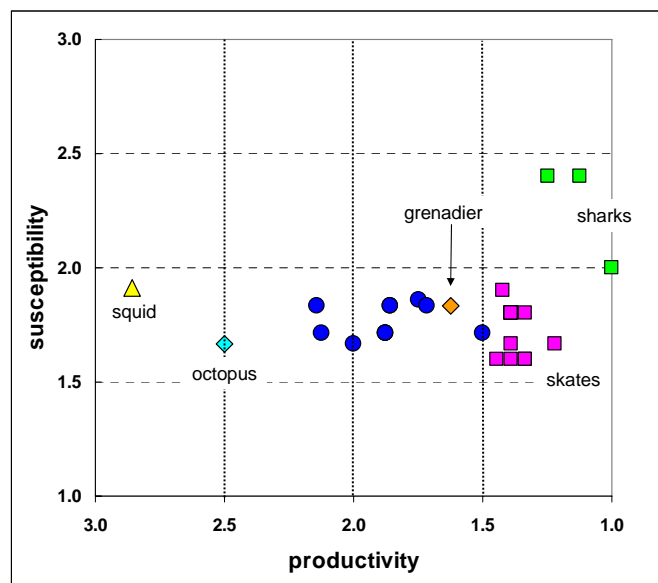
a suggested management measure for EC:

1) no directed fishing and MRAs

2) create "allowable incidental catch"

3) if AIC exceeded more than once in 4 years (for example), re-evaluate classification

4) AIC could be time and area specific, e.g. to prevent impacts to critical foragers

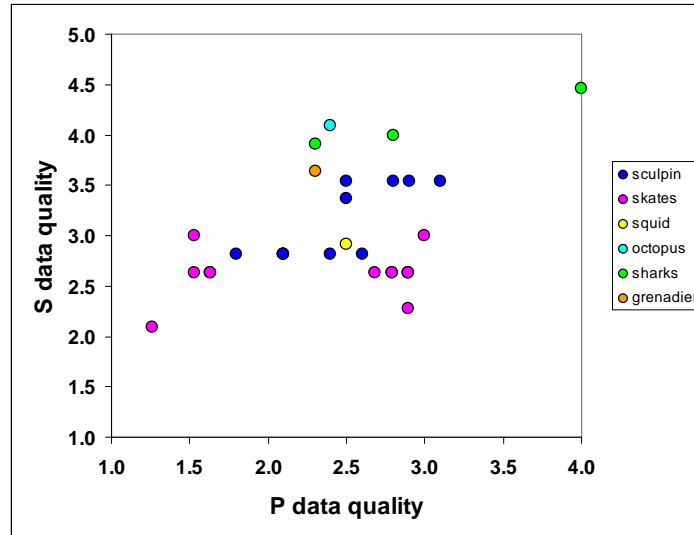# vulnerability analysis: sculpins

sculpins

susceptibility vs productivity

- threaded
- YIL
- RIL
- LIL
- Myoxocephalus
- bigmouth
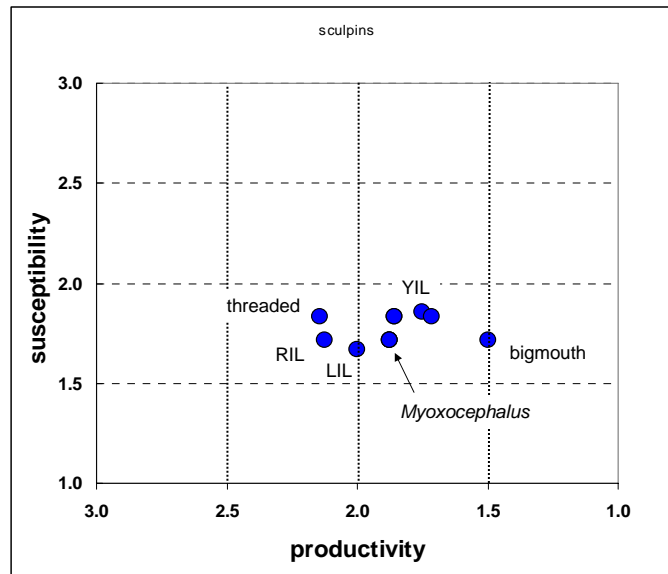
vuln. analysis: Other Species

susceptibility vs productivity

- squid
- octopus
- grenadier
- sharks
- skates

Other Species data quality

summary

- **MSRA poses challenges for management of complexes and nontarget species**

- **EC category necessary for forage fishes**

- **Other Species needs to be broken up**

- **management of complexes needs to be evaluated**

- **options exist in EC for non-ACL management measures**

- **PSA is a useful tool but is semi-quantitative and needs to be used carefully**

discussion

1) is EC designation a good idea (ie would it reduce protection or pressure to obtain better data)?

2) what do we do about the problem of small TACs?

3) what is the most appropriate way to manage complexes? indicator stocks? single ACL for complex?

4) how big a difference in M or vulnerability warrants separate management?

5) can we use quotas in the EC category, either as triggers for re-classification or to close directed fisheries?

(federal rule language)

NS language for classifications

(2) Stocks in a fishery. Stocks in a fishery may be grouped into stock complexes, as appropriate…

(3) "Target stocks" are stocks that fishers seek to catch…

(4) "Non-target species" and "nontarget stocks" are fish caught incidentally during the pursuit of target stocks in a fishery…They may or may not be retained for sale or personal use. Non-target species may be included in a fishery and, if so, they should be identified at the stock level. Some non-target species may be identified in an FMP as ecosystem component (EC) species or stocks.

(5) Ecosystem component (EC) species.

(i) To be considered for possible classification as an EC species, the species should:
(A) Be a non-target species or nontarget stock;
(B) Not be determined to be subject to overfishing, approaching overfished, or overfished;
(C) Not be likely to become subject to overfishing or overfished, according to the best available information, in the absence of conservation and management measures; and
(D) Not generally be retained for sale or personal use.

NS language for classifications

(ii) Occasional retention of the species would not, in and of itself, preclude consideration of the species under the EC classification… it is important to consider whether use of the EC species classification in a given instance is consistent with MSA conservation and management requirements

(iii) EC species may be identified at the species or stock level, and may be grouped into complexes. EC species may, but are not required to, be included in an FMP or FMP amendment for any of the following reasons: for data collection purposes; for ecosystem considerations related to specification of OY for the associated fishery; as considerations in the development of conservation and management measures for the associated fishery; and/or to address other ecosystem issues. While EC species are not considered to be "in the fishery," a Council should consider measures for the fishery to minimize bycatch and bycatch mortality of EC species consistent with National Standard 9, and to protect their associated role in the ecosystem. EC species do not require specification of reference points but should be monitored to the extent that any new pertinent scientific information becomes available… to determine changes in their status or their vulnerability to the fishery. If necessary, they should be reclassified as "in the fishery."

NS language for complexes

(8) Stock complex. "Stock complex" means a group of stocks that are sufficiently similar in geographic distribution, life history, and vulnerabilities to the fishery such that the impact of management actions on the stocks is similar. At the time a stock complex is established, the FMP should provide a full and explicit description of the proportional composition of each stock in the stock complex, to the extent possible. Stocks may be grouped into complexes for various reasons, including where stocks in a multispecies fishery cannot be targeted independent of one another and MSY can not be defined on a stock-by-stock basis…; where there is insufficient data to measure their status relative to SDC; or when it is not feasible for fishermen to distinguish individual stocks among their catch. The vulnerability of stocks to the fishery should be evaluated when determining if a particular stock complex should be established or reorganized, or if a particular stock should be included in a complex. Stock complexes may be comprised of: one or more indicator stocks, each of which has SDC and ACLs, and several other stocks; several stocks without an indicator stock, with SDC and an ACL for the complex as a whole; or one or more indicator stocks, each of which has SDC and management objectives, with an ACL for the complex as a whole (this situation might be applicable to some salmon species).

NS language for complexes

(9) Indicator stocks. An indicator stock is a stock with measurable SDC that can be used to help manage and evaluate more poorly known stocks that are in a stock complex. If an indicator stock is used to evaluate the status of a complex, it should be representative of the typical status of each stock within the complex, due to similarity in vulnerability. If the stocks within a stock complex have a wide range of vulnerability, they should be reorganized into different stock complexes that have similar vulnerabilities; otherwise the indicator stock should be chosen to represent the more vulnerable stocks within the complex. In instances where an indicator stock is less vulnerable than other members of the complex, management measures need to be more conservative so that the more vulnerable members of the complex are not at risk from the fishery. More than one indicator stock can be selected to provide more information about the status of the complex. When indicator stock(s) are used, periodic re-evaluation of available quantitative or qualitative information (e.g., catch trends, changes in vulnerability, fish health indices, etc.) is needed to determine whether a stock is subject to overfishing, or is approaching (or in) an overfished condition.

NS language for complexes

(10) Vulnerability. A stock's vulnerability is a combination of its productivity, which depends upon its life history characteristics, and its susceptibility to the fishery. Productivity refers to the capacity of the stock to produce MSY and to recover if the population is depleted, and susceptibility is the potential for the stock to be impacted by the fishery, which includes direct captures, as well as indirect impacts to the fishery (e.g., loss of habitat quality). Councils in consultation with their SSC, should analyze the vulnerability of stocks in stock complexes where possible.