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Northern Hake Stock dynamics

Future Research

Dorleta García



EUSKO JAURLARITZA
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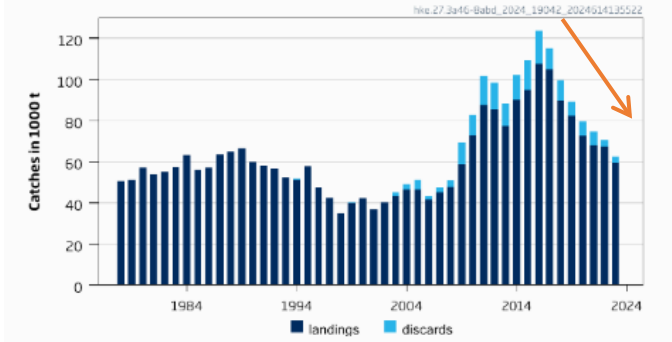


Europar Batasunak
kofinantzatua

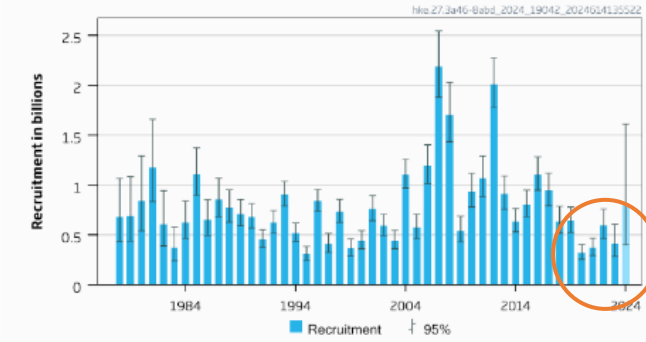
VArmMer. FEMPA 2024-2026

The assessment

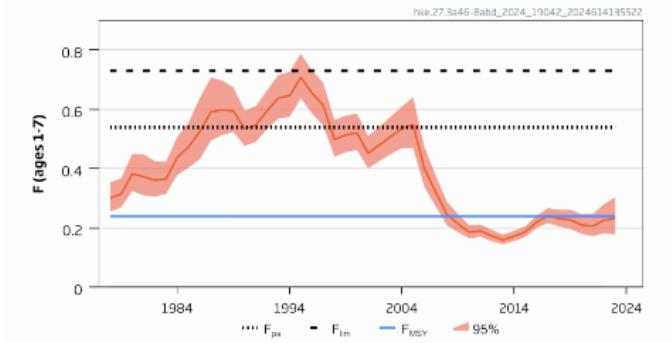
Catches



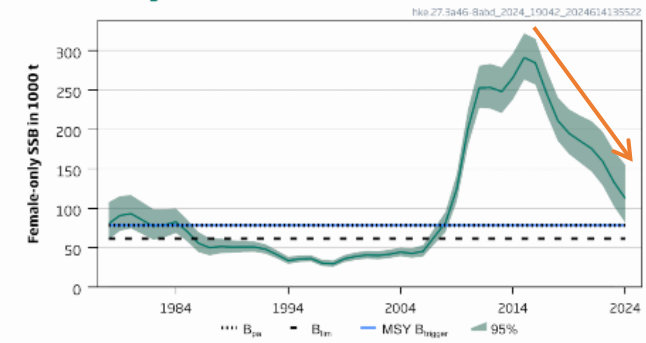
Recruitment (age 0)



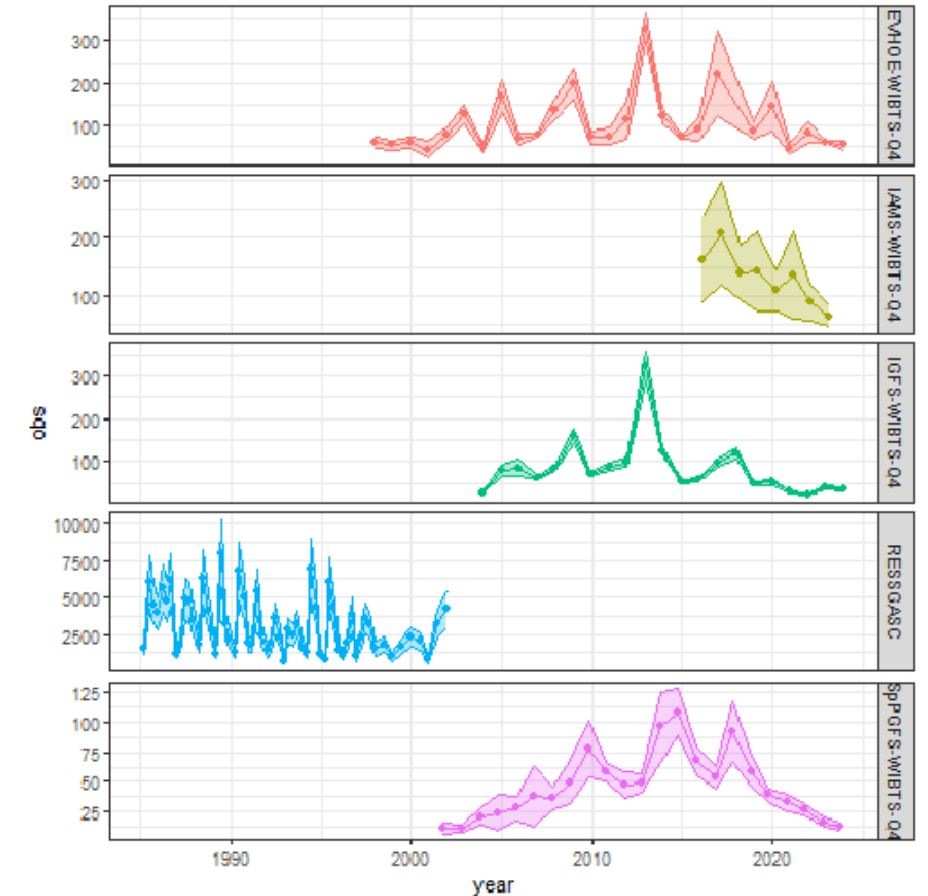
F



Female-only SSB



The Surveys



Both assessments and surveys show a big decrease in the biomass of the stock due to a lack of good recruitments

Spatial distribution of the catches



+ 81%

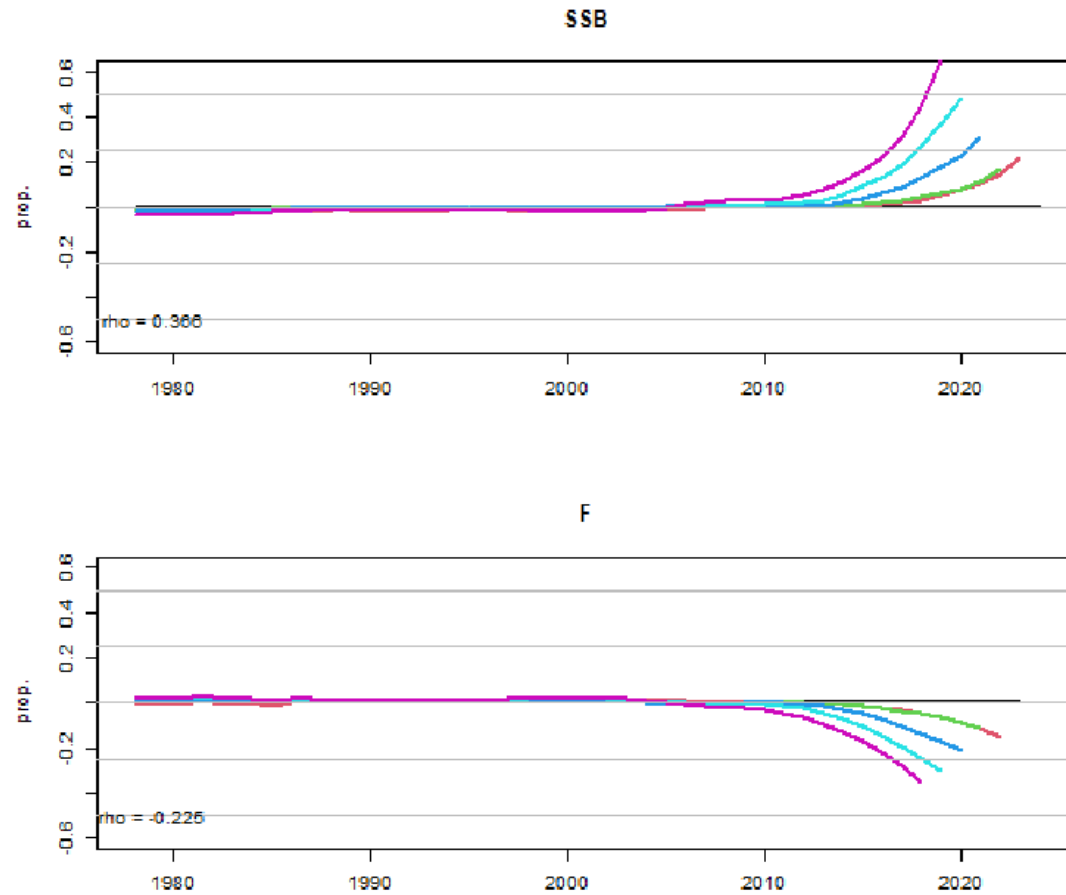
- 33%

- 8%

- 71%!!!

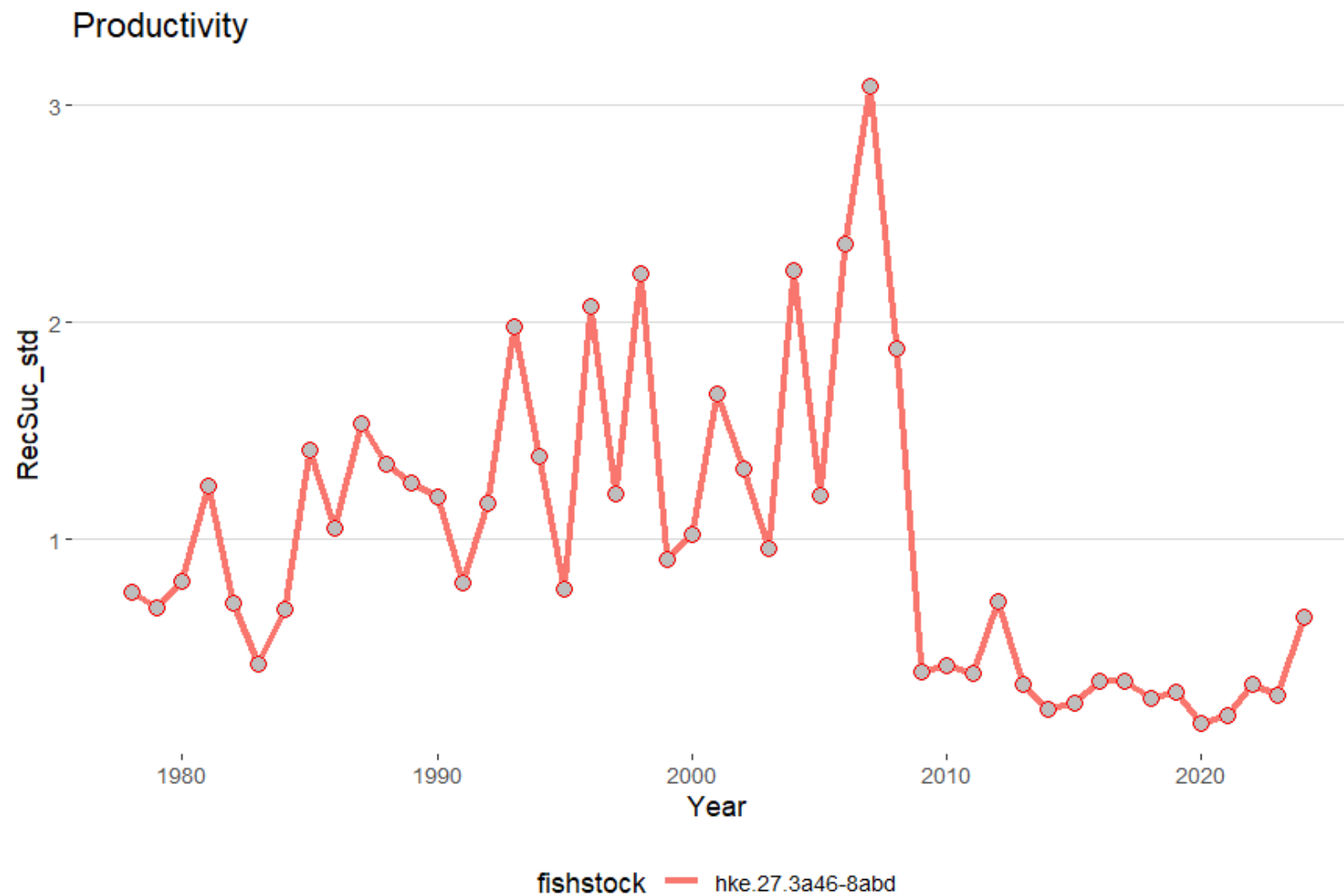
+ 5%

The assessment



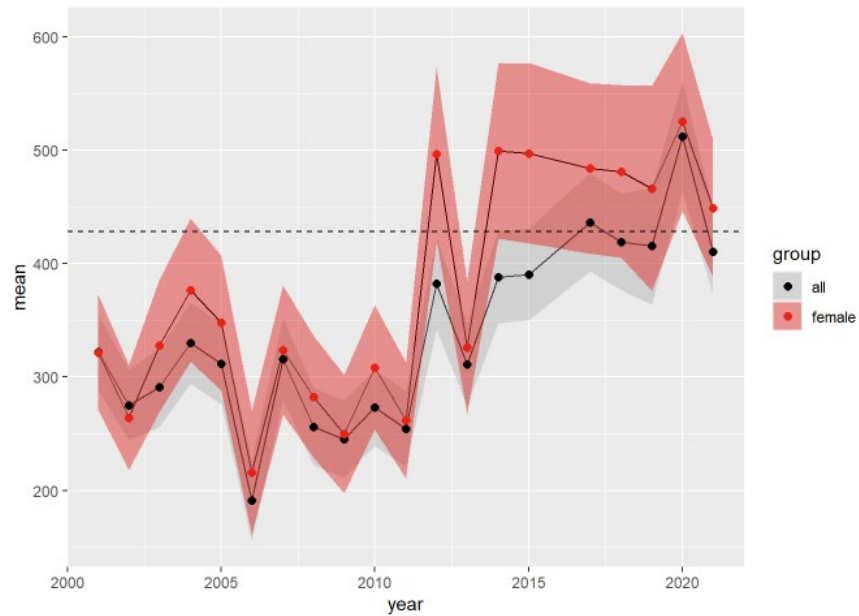
**Retrospective
pattern
⇒ Category 3???**

Productivity of the stock

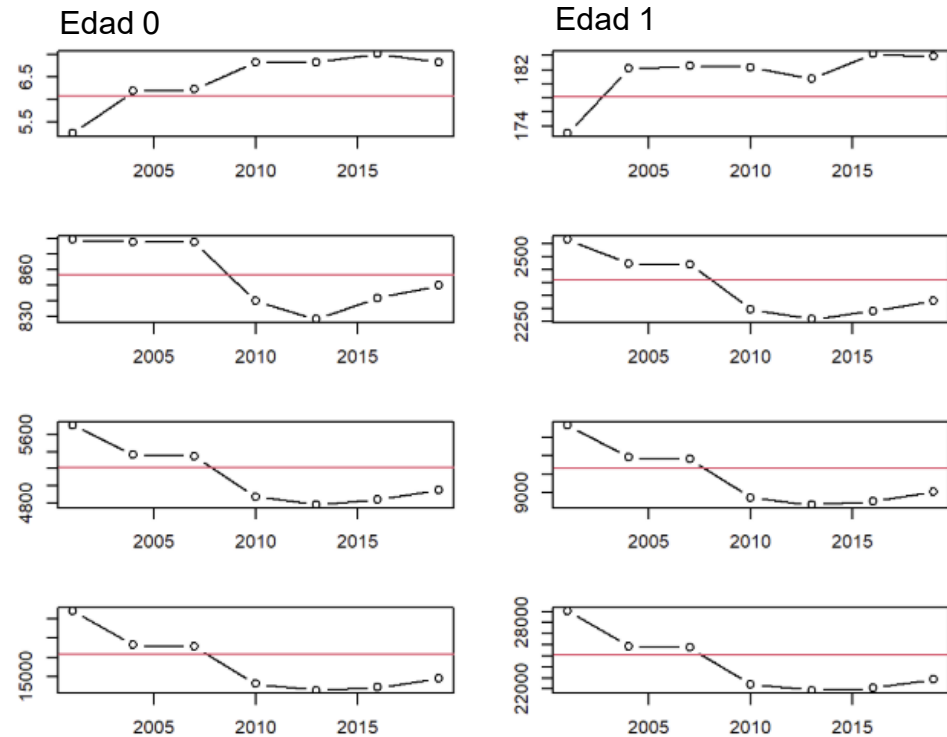


Densodependence

Maturity



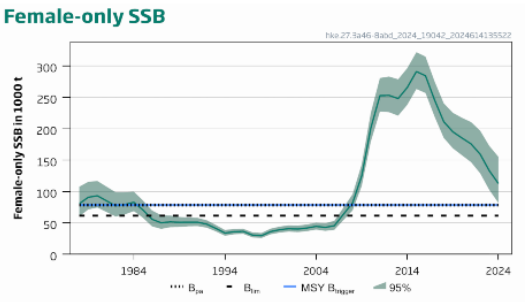
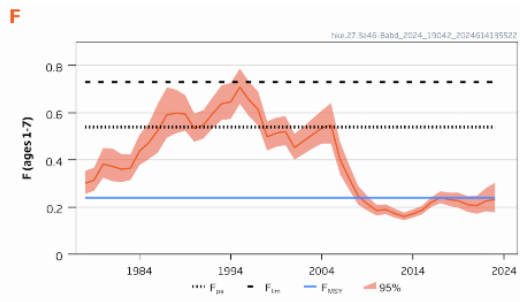
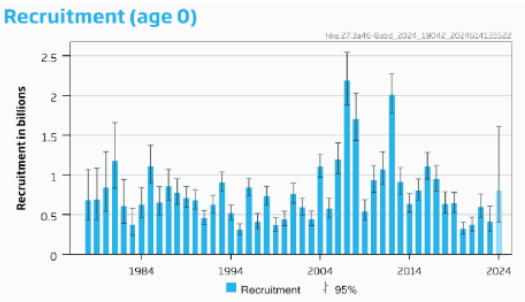
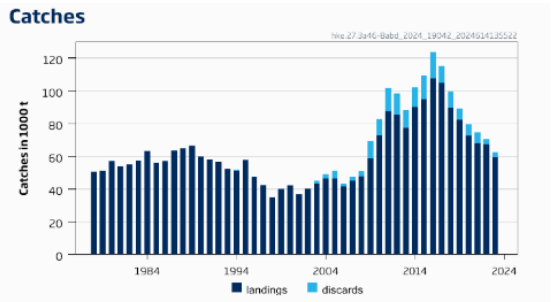
Weights at age



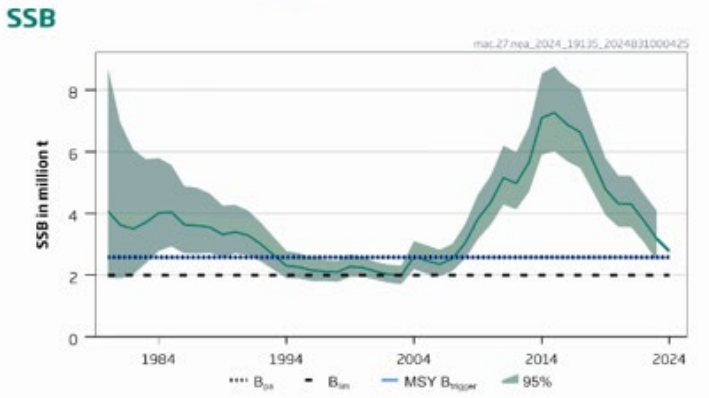
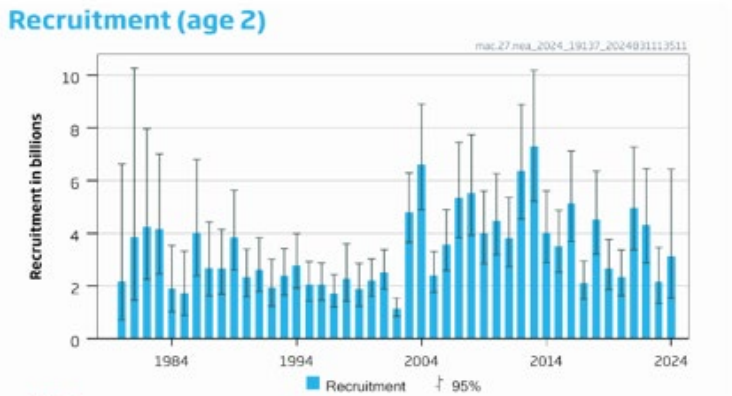
The higher the biomass, the lower the weight and the higher the maturity age

Hake in an ecosystem context

Hake



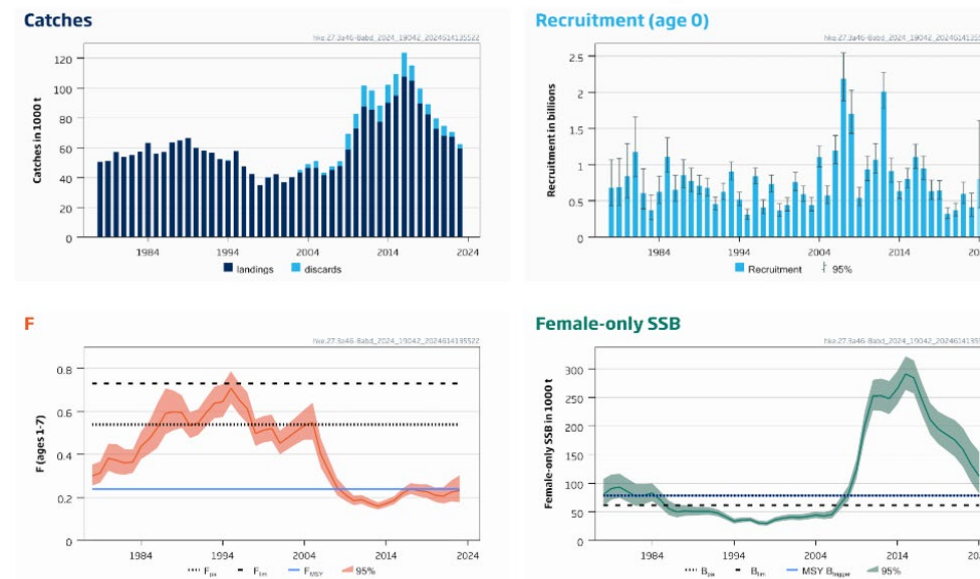
Mackerel



Objectives:

- Develop a spatial distribution model driven by environmental variables.
- Identify the density-dependent processes in the productivity of the stock.
- Identify the factors that explain the variability in recruitment.
- Identify the causes of variability in the abundance of the northern hake stock.
- Improve stock assessment and management.

Assessment Summary





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