Fisheries and Oceans Canada

Pêches et Océans Canada

Ecosystems and Oceans Science

Sciences des écosystèmes et des océans

Maritimes Region

Canadian Science Advisory Secretariat
Science Response 2026/004

STOCK STATUS UPDATE OF SCALLOP (*PLACOPECTEN MAGELLANICUS*) IN SCALLOP PRODUCTION AREAS 1 TO 6 IN THE BAY OF FUNDY

CONTEXT

The Fisheries Management Branch of Fisheries and Oceans Canada (DFO) has requested that the Bay of Fundy (BoF) and Approaches Sea Scallop (*Placopecten magellanicus)* stocks in Scallop Production Areas (SPAs) 1 to 6 be assessed relative to reference points that are consistent with the DFO Precautionary Approach and to provide harvest advice based on various potential catch levels for the 2025–26 fishery. This Science Response Report is from the November 21, 2025, regional peer review on the Stock Status Update of Bay of Fundy Scallop in Scallop Production Areas 1A, 1B, and 3–6.

SCIENCE ADVICE

Status

Scallop Production Area 1A

- The commercial biomass estimate in 2025 was 2,099 tonnes (t) (meats), with a greater than 0.99 probability of being above the Upper Stock Reference (USR) and in the healthy zone.

- The biomass estimate of recruit Scallops in 2025 was 4 t, which is below the long-term (1997–2024) median of 52 t and is near the lowest observed value in the time-series.

- The most recent year (2024) proportional exploitation rate (realized) was 0.13 and below the Removal Reference (RR) of 0.15.

Scallop Production Area 1B

- The commercial biomass estimate in 2025 was 2,595 t (meats), with a 0.94 probability of being above the USR and in the healthy zone.

- The biomass estimate of recruit Scallops in 2025 was 37 t, which is below the long-term (1997–2024) median of 149 t and is at the lowest observed value in the time-series.

- The most recent year (2024) proportional exploitation rate (realized) was 0.13 and was below the RR of 0.15.

Scallop Production Area 3

- The commercial biomass estimate in 2025 was 1,110 t (meats), with a 0.66 probability of being above the USR and in the healthy zone.

- The biomass estimate of recruit Scallops in 2025 was 11 t, which is below the long-term (1996–2024) median of 51 t and is near the lowest observed value in the time-series.

- The most recent year (2024) proportional exploitation rate (realized) was 0.11 and was below the RR of 0.15.

Scallop Production Area 4/5

- Since 2014, Scallop Production Area (SPA) 4 and SPA 5 have been managed as one quota area. In developing catch advice, the assessment methodology is applied to SPA 4 only.

- The commercial biomass estimate in 2025 was 1,028 t (meats), with a 0.97 probability of being above the USR and in the healthy zone.

- The biomass estimate of recruit Scallops in 2025 was 3 t, which is below the long-term (1983–2024) median of 26 t and is near the lowest observed value in the time-series.

- The most recent year (2024) proportional exploitation rate (realized) was 0.13 and was below the RR of 0.15.

Scallop Production Area 6

- The commercial biomass estimate in 2025 was 769 t (meats), with a 0.97 probability of being above the USR and in the healthy zone.

- The biomass estimate of recruit Scallops in 2025 was 2 t, which is below the long-term (2006–2024) median of 35 t and is near the lowest observed value in the time-series.

- The most recent year (2024) proportional exploitation rate (realized) was 0.19 and was above the RR of 0.18.

Trends

Scallop Production Area 1A

- Commercial biomass has been above the USR since 2001. Biomass declined from 2024 to 2025 from 2,813 t to 2,099 t.

- Recruit biomass has been low and below the long-term (1997–2024) median since 2016. Recruit biomass increased slightly from 2024 to 2025 from 3 t to 4 t and is near the lowest observed value in the time-series.

- The proportional exploitation rate (realized) has remained at or below the RR (0.15) since 2019. Between 2024 and 2025, the realized proportional exploitation rate was 0.13.

- The proportional natural mortality rate has been above the long-term (1997–2024) median since 2020. Natural mortality increased from 2024 to 2025 from 0.18 to 0.22.

Scallop Production Area 1B

- Commercial biomass has been above the USR since 1999. Biomass declined from 2024 to 2025 from 3,377 t to 2,595 t.

- Recruit biomass has fluctuated above and below the long-term (1997–2024) median across the time-series. Recruit biomass decreased from 2024 to 2025 from 45 t to 37 t, and is at the lowest observed value in the time-series.

- The proportional exploitation rate has fluctuated above and below the RR (0.15) across the time-series. Between 2024 and 2025, the realized proportional exploitation rate was 0.13.

- The proportional natural mortality rate has been above the long-term (1997–2024) median since 2012. Natural mortality increased from 2024 to 2025 from 0.18 to 0.29, which is the highest observed value in the time-series.

Scallop Production Area 3

- Commercial biomass has been above the USR since 2011. Biomass declined from 2024 to 2025 from 1,654 t to 1,110 t.

- Recruit biomass has been low and below the long-term (1996–2024) median since 2016. Recruit biomass increased slightly from 2024 to 2025 from 10 t to 11 t and is near the lowest observed value in the time-series.

- The proportional exploitation rate (realized) has remained below the RR (0.15) since 2000. Between 2024 and 2025, the realized proportional exploitation rate was 0.11.

- The proportional natural mortality rate has been above the long-term (1996–2024) median since 2019. Natural mortality increased from 2024 to 2025 from 0.24 to 0.29, which is the highest observed value in the time-series.

Scallop Production Area 4/5

- Commercial biomass has been above the USR since 2010. Biomass declined from 2024 to 2025 from 1,674 t to 1,028 t.

- Recruit biomass has been low and below the long-term (1983–2024) median since 2016. Recruit biomass increased from 2024 to 2025 from 1 t to 3 t and is near the lowest observed value in the time-series.

- The proportional exploitation rate (realized) has remained below the RR (0.15) since 2006. Between 2024 and 2025, the realized proportional exploitation rate was 0.13.

- The proportional natural mortality rate has been above the long-term (1983–2024) median since 2021. Natural mortality increased from 2024 to 2025 from 0.18 to 0.21.

Scallop Production Area 6

- Commercial biomass has been above the Upper Stock Reference (USR) since 2013. Biomass declined from 2024 to 2025 from 1,379 t to 769 t.

- Recruit biomass has been low and below the long-term (2006–2024) median since 2017. Recruit biomass remained the same from 2024 to 2025 at 2 t and is near the lowest observed value in the time-series.

- The proportional exploitation rate (realized) has been above the RR (0.18) since 2023. Between 2024 and 2025, the realized proportional exploitation rate was above the RR at 0.19.

- The proportional natural mortality rate has been at the long-term (2006–2025) median since 2022. In 2025, natural mortality was at the long-term median of 0.11.

Ecosystem and Climate Change Considerations

- Interannual changes in Scallop condition (meat weight given shell height) are likely driven by environmental variability (Liu et al. 2021; Hebert et al. 2025).

Stock Advice

- Scallop Production Area 1A - Evaluated catch scenarios from 0 t to 275 t for the 2025–26 fishing season are projected to result in declines in commercial biomass ranging from 12% to 24%, with a probability of biomass increase ranging from 0.32 to 0.16. Catch scenarios

from 0 t to 275 t correspond to probabilities from 0.96 to 0.90 that commercial biomass will remain above the USR and correspond to a probability greater than 0.99 that commercial biomass will remain above the LRP.

- Scallop Production Area 1B - Evaluated catch scenarios from 0 t to 350 t for the 2025–26 fishing season are projected to result in declines in commercial biomass ranging from 10% to 22%, with a probability of biomass increase ranging from 0.32 to 0.13. Catch scenarios from 0 t to 350 t correspond to probabilities from 0.79 to 0.63 that commercial biomass will remain above the USR and correspond to probabilities from greater than 0.99 to 0.99 that commercial biomass will remain above the LRP.

- Scallop Production Area 3 - Evaluated catch scenarios from 0 t to 140 t for the 2025–26 fishing season are projected to result in declines in commercial biomass ranging from 17% to 27%, with a probability of biomass increase ranging from 0.25 to 0.12. Catch scenarios from 0 t to 140 t correspond to probabilities from 0.43 to 0.31 that commercial biomass will remain above the USR and correspond to probabilities from 0.88 to 0.78 that commercial biomass will remain above the LRP.

- Scallop Production Area 4/5 - Evaluated catch scenarios from 0 t to 140 t for the 2025–26 fishing season are projected to result in declines in commercial biomass ranging from 10% to 22%, with a probability of biomass increase ranging from 0.38 to 0.23. Catch scenarios from 0 t to 140 t correspond to probabilities from 0.72 to 0.58 that commercial biomass will remain above the USR and correspond to probabilities from 0.93 to 0.86 that commercial biomass will remain above the LRP.

- Scallop Production Area 6 - Evaluated catch scenarios from 0 t to 245 t for the 2025–26 fishing season are projected to result in declines in commercial biomass ranging from 4% to 21%, with a probability of biomass increase ranging from 0.45 to 0.21. Catch scenarios from 0 t to 245 t correspond to probabilities from 0.87 to 0.72 that commercial biomass will remain above the Upper Stock Reference (USR) and correspond to probabilities from greater than 0.99 to 0.98 that commercial biomass will remain above the LRP.

BASIS FOR ASSESSMENT

Assessment Details

Year Assessment Approach was Approved

2015 (Nasmith et al. 2016)

Assessment Type

Interim Year Update

Most Recent Assessment Date

1. Last Full Assessment: 2015 (DFO 2016)

2. Last Interim-Year Update: 2024 (DFO 2025)

Assessment Approach

1. Broad category: Single stock assessment model

2. Specific category: Delay difference, Biomass dynamics, State-Space

The population dynamics of commercial and recruit Scallops for SPAs 1A, 1B, 3, 4/5, and 6 were modelled using a Bayesian state-space model with modifications presented in Smith et al. (2012), Smith and Hubley (2014), and Nasmith et al. (2016). In all SPAs, Scallop removals accounted for in assessments include commercial landings from all three inshore Scallop fleets (including communal commercial) and Food, Social and Ceremonial (FSC) catch by Scallop drag. Landed recreational and FSC catch by dip netting, diving, tongs, and hand are not accounted for in the assessment.

Stock Structure Assumption

This assessment does not include SPA 2 as it is considered to be marginal habitat for Scallops and is not monitored regularly. This area was last assessed in 2006 (DFO 2007).

Reference Points

Reference points have been developed for SPAs 1A, 1B, 3, 4/5 and 6 (Table 1). Since 2014, SPA 4 and SPA 5 have been managed as one quota area.

Table 1. Reference points for Scallop Production Areas (SPA) in the Bay of Fundy. Reference points include Limit Reference Point (LRP), Upper Stock Reference (USR), and removal reference (RR).

SPA	LRP	USR	RR
SPA 1A	480 t	1,000 t	0.15
SPA 1B	880 t	1,800 t	0.15
SPA 3	600 t	1,000 t	0.15
SPA 4/5	530 t	750 t	0.15
SPA 6	236 t	471 t	0.18

Data

The following data sources are incorporated into the stock assessment model used for SPAs 1A, 1B, 3, 4/5, and 6:

- Commercial data (SPA 1A: 1998–2025, SPA 1B: 1998–2025; SPA 3: 1997–2025; SPA 4/5: 1984–2025; SPA 6: 2007–2025) from all three inshore Scallop fleets (including communal commercial).

- FSC catch by Scallop drag data (2023–2025).

- Inshore Scallop survey data excluding 2020 (SPA 1A: 1997–2025; SPA 1B: 1997–2025; SPA 3: 1996–2025; SPA 4/5: 1983–2025; SPA 6: 2006–2025).

In 2020 there was no survey. The indices used as input for the model in 2020 are imputed using the 2019 and 2021 values; this approach is consistent with methods used to address missing information in previous years (e.g., Nasmith et al. 2016). A detailed description of survey design and strata boundaries is presented in Nasmith et al. (2016).
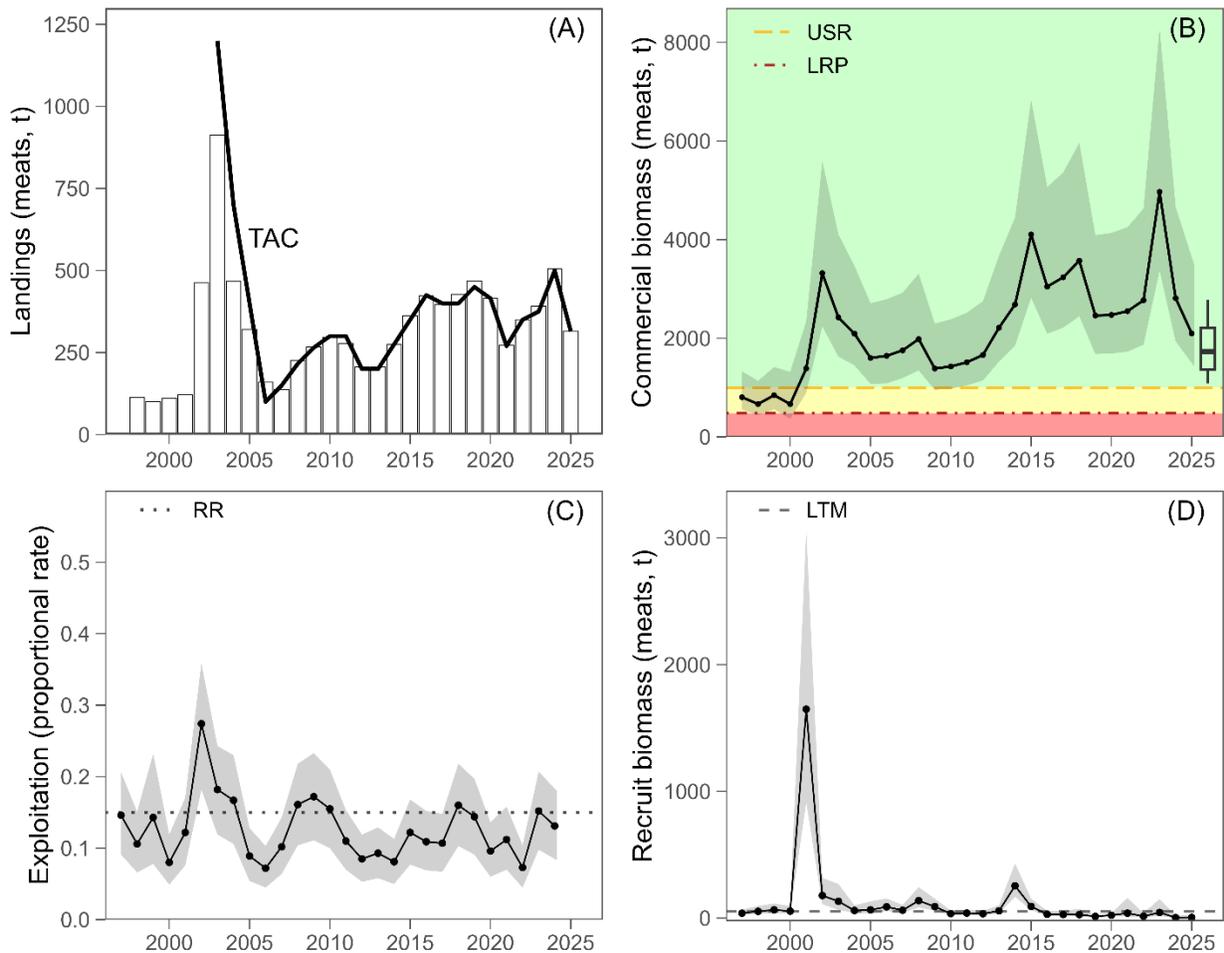
ASSESSMENT

Figure 1. (A) Annual landings of Scallop meats (tonnes [t]) from Scallop Production Area (SPA) 1A between 1998 and 2025. The black solid line represents total allowable catch (TAC). (B) Median biomass estimates in SPA 1A for commercial size Scallops in meat weight (tonnes) from the assessment model fit to the survey and commercial data. The grey shaded region represents the upper and lower 95% credible intervals. The predicted commercial size biomass for 2026, assuming the 2025–26 interim TAC (150 t), is displayed as a box plot with median, 50% credible limits (box) and 80% credible limits (whiskers). The green-shaded area represents the healthy zone (based on an upper stock reference [USR] point of 1,000 t), the yellow-shaded area represents the cautious zone, and red-shaded area represents the critical zone (based on limit reference point [LRP] of 480 t; Nasmith et al. [2014]). (C) Median proportional exploitation rate estimates (black solid line) in relation to the removal reference (RR) of 0.15 (grey dotted line). The grey shaded region represents the upper and lower 95% credible intervals. (D) Median biomass estimates (tonnes) for recruit size Scallops (black solid line) in relation to the long-term median (LTM; 1997–2024) recruit biomass (grey dashed line). The shaded region represents the upper and lower 95% credible intervals.
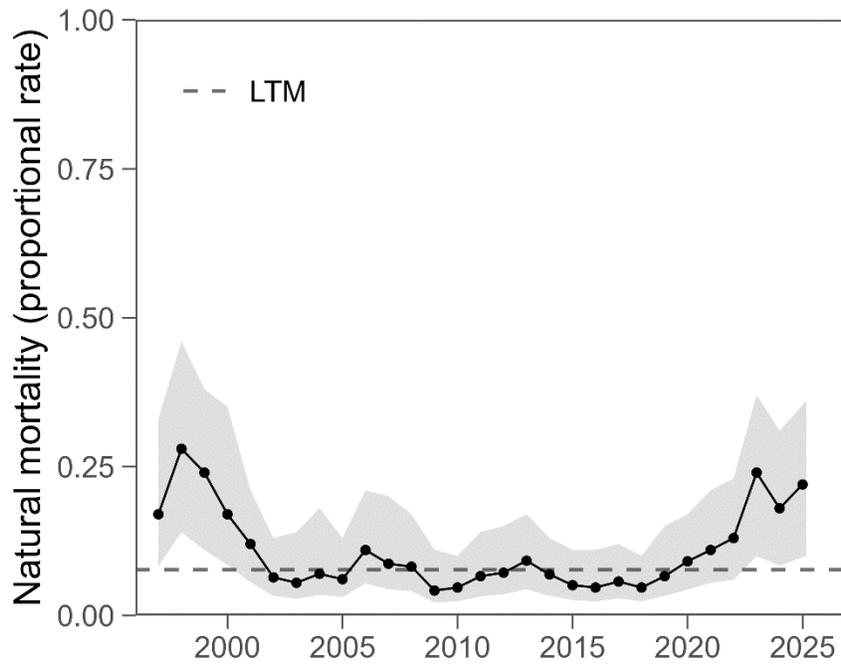
Figure 2. Median proportional natural mortality rate estimates (black solid line) of Scallop from Scallop Production Area 1A, in relation to respective long-term median (LTM; 1997–2024) natural mortality rates (grey dashed line). The grey shaded regions represent corresponding upper and lower 95% credible intervals.
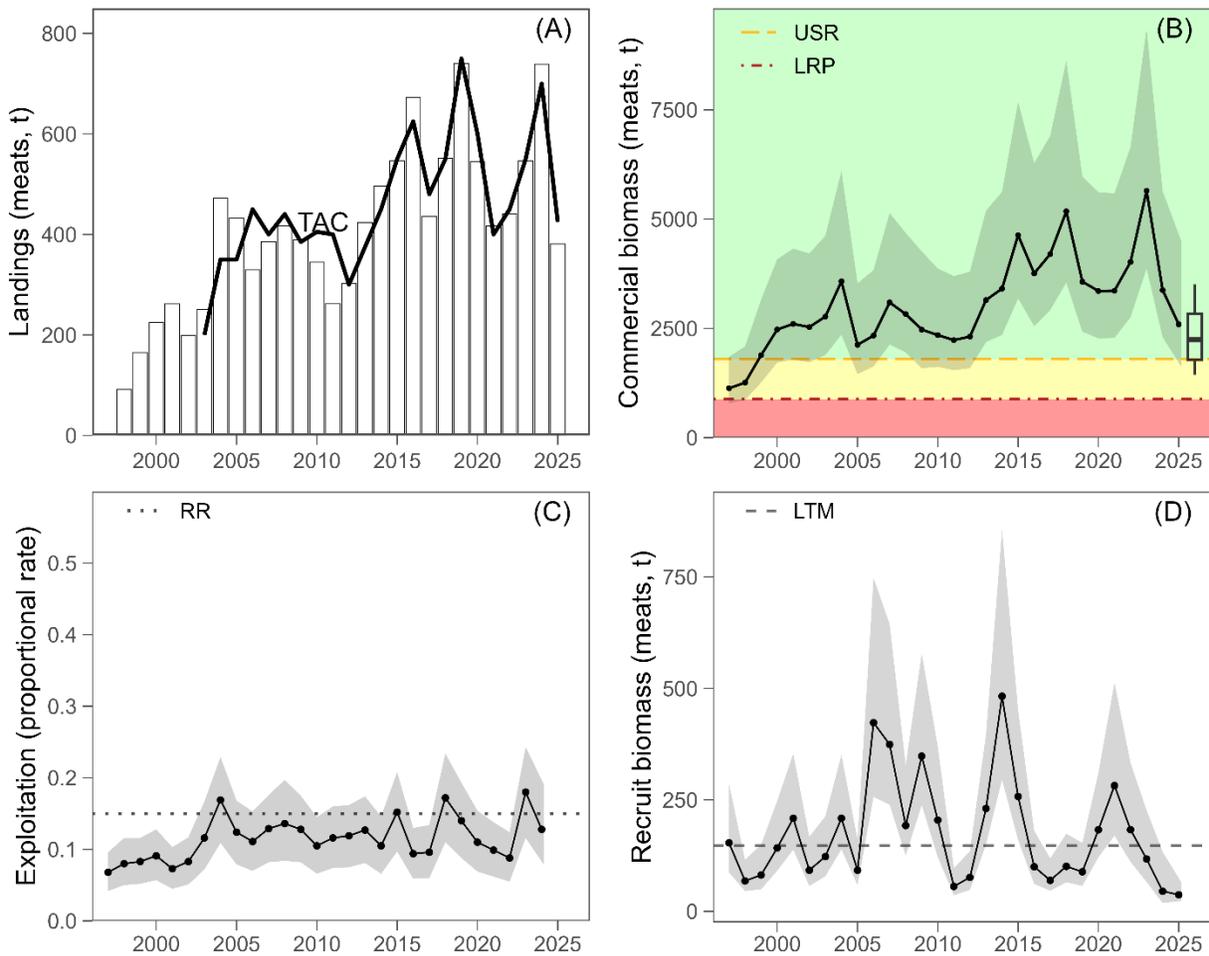
Figure 3. (A) Annual landings of Scallop meats (tonnes [t]) from Scallop Production Area (SPA) 1B between 1998 and 2025. The black solid line represents total allowable catch (TAC). (B) Median biomass estimates in SPA 1B for commercial size Scallops in meat weight (tonnes) from the assessment model fit to the survey and commercial data. The grey shaded region represents the upper and lower 95% credible intervals. The predicted commercial size biomass for 2026, assuming the 2025–26 interim TAC (125 t), is displayed as a box plot with median, 50% credible limits (box) and 80% credible limits (whiskers). The green-shaded area represents the healthy zone (based on an upper stock reference [USR] point of 1,800 t), the yellow-shaded area represents the cautious zone, and red-shaded area represents the critical zone (based on limit reference point [LRP] of 880 t; Nasmith et al. [2014]). (C) Median proportional exploitation rate estimates (black solid line) in relation to the removal reference (RR) of 0.15 (grey dotted line). The grey shaded region represents the upper and lower 95% credible intervals. (D) Median biomass estimates (tonnes) for recruit size Scallops (black solid line) in relation to the long-term median (LTM; 1997–2024) recruit biomass (grey dashed line). The shaded region represents the upper and lower 95% credible intervals.
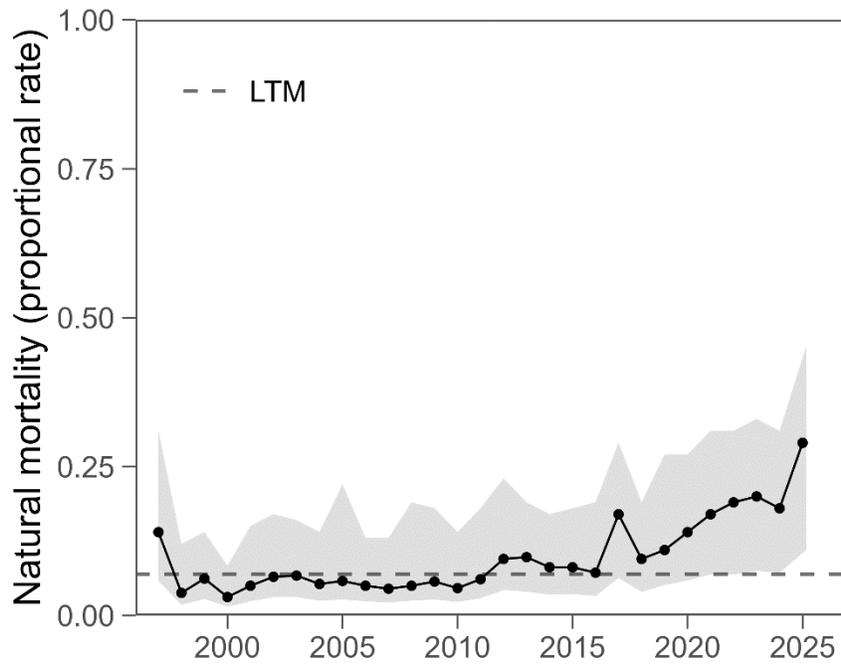
Figure 4. Median proportional natural mortality rate estimates (black solid line) of Scallop from Scallop Production Area 1B, in relation to respective long-term median (LTM; 1997–2024) natural mortality rates (grey dashed line). The grey shaded regions represent corresponding upper and lower 95% credible intervals.
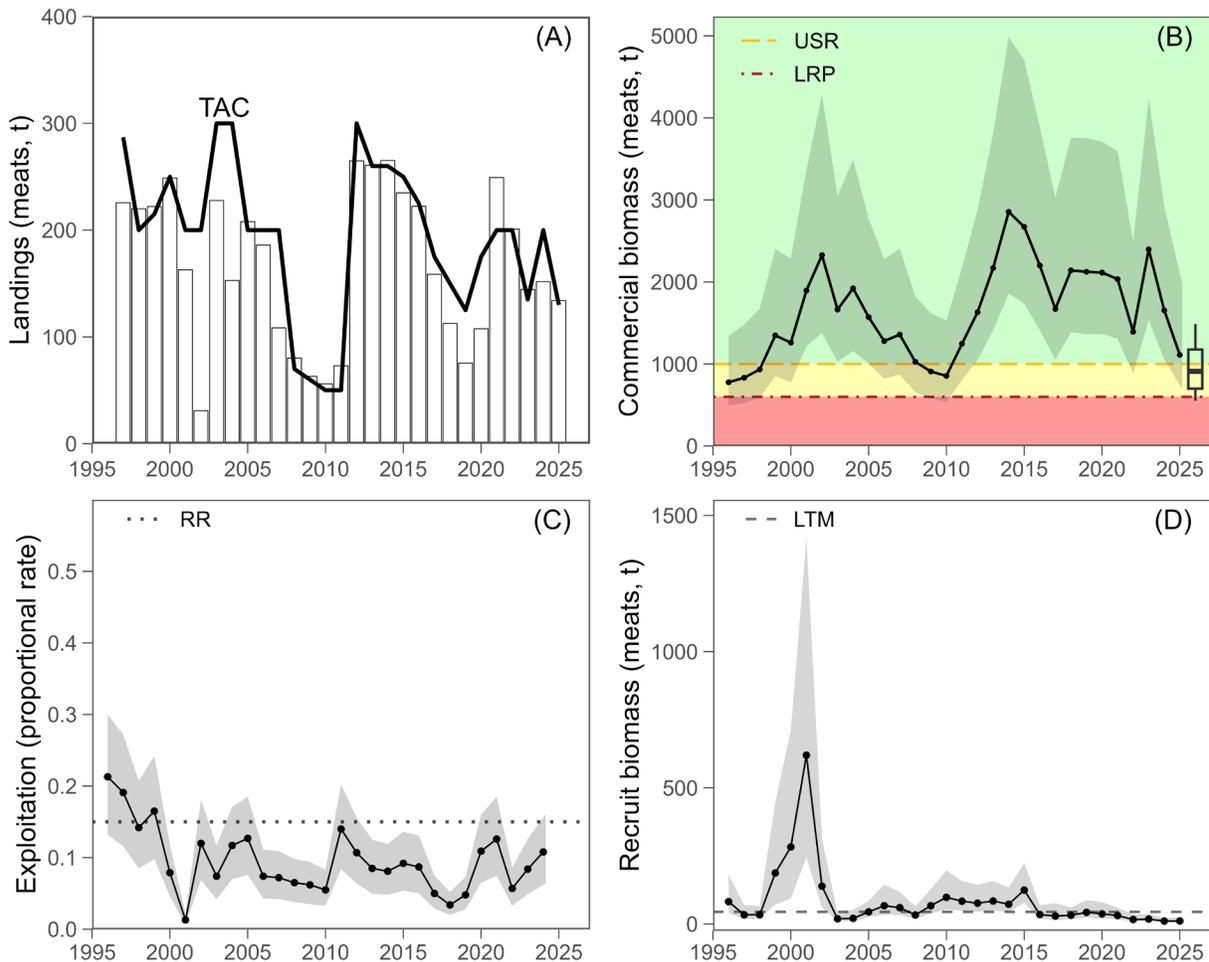
Figure 5. (A) Annual landings of Scallop meats (tonnes [t]) from Scallop Production Area (SPA) 3 between 1997 and 2025. The black solid line represents total allowable catch (TAC). (B) Median biomass estimates in SPA 3 for commercial size Scallops in meat weight (tonnes) from the assessment model fit to the survey and commercial data. The grey shaded region represents the upper and lower 95% credible intervals. The predicted commercial size biomass for 2026, assuming the 2025–26 interim TAC (30 t), is displayed as a box plot with median, 50% credible limits (box) and 80% credible limits (whiskers). The green-shaded area represents the healthy zone (based on an upper stock reference [USR] point of 1,000 t), the yellow-shaded area represents the cautious zone, and red-shaded area represents the critical zone (based on limit reference point [LRP] of 600 t; Nasmith et al. [2014]). (C) Median proportional exploitation rate estimates (black solid line) in relation to the removal reference (RR) of 0.15 (grey dotted line). The grey shaded region represents the upper and lower 95% credible intervals. (D) Median biomass estimates (tonnes) for recruit size Scallops (black solid line) in relation to the long-term median (LTM; 1996–2024) recruit biomass (grey dashed line). The shaded region represents the upper and lower 95% credible intervals.
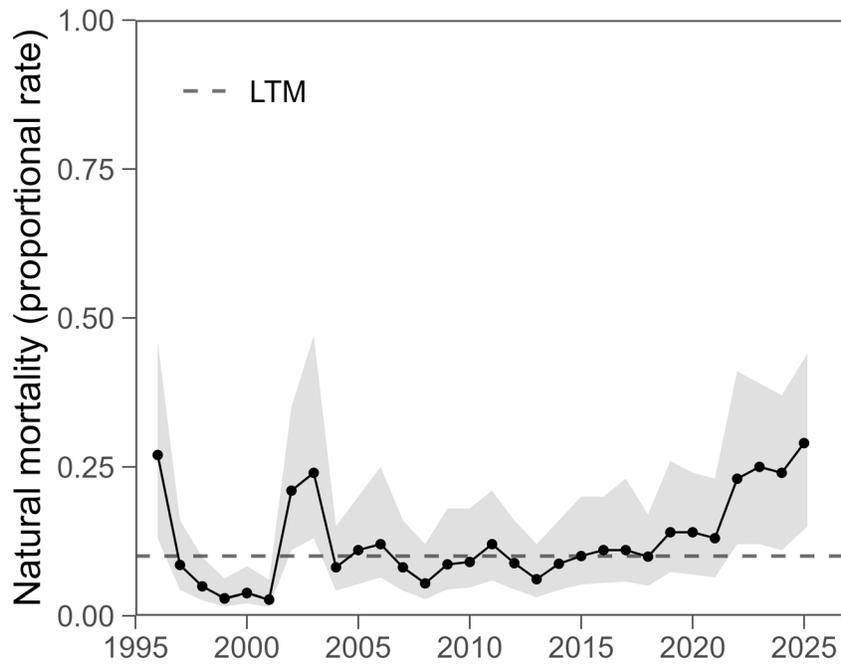
Figure 6. Median proportional natural mortality rate estimates (black solid line) of Scallop from Scallop Production Area 3, in relation to respective long-term median (LTM; 1996–2024) natural mortality rates (grey dashed line). The grey shaded regions represent corresponding upper and lower 95% credible intervals.
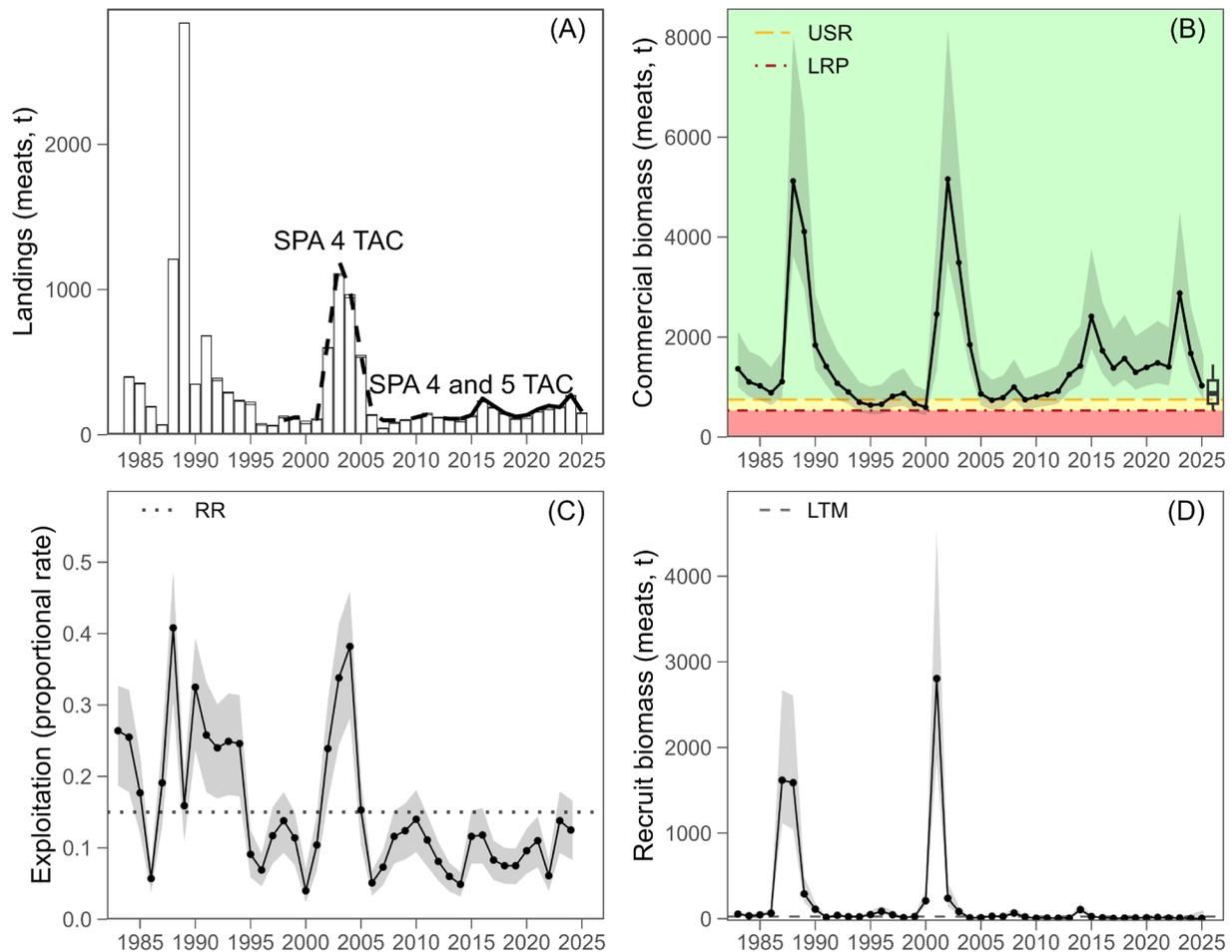
Figure 7. (A) Annual landings of Scallop meats (tonnes [t]) from Scallop Production Area (SPA) 4 between 1984 and 2025. The black dashed and solid lines represent total allowable catch (TAC) for SPA 4 until 2013, and the combined for SPA 4 and 5 since 2014, respectively. (B) Median biomass estimates in SPA 4 for commercial size Scallops in meat weight (tonnes) from the assessment model fit to the survey and commercial data. The grey shaded region represents the upper and lower 95% credible intervals. The predicted commercial size biomass for 2026, assuming the 2025–26 interim TAC (80 t), is displayed as a box plot with median, 50% credible limits (box) and 80% credible limits (whiskers). The green-shaded area represents the healthy zone (based on an upper stock reference [USR] point of 750 t), the yellow-shaded area represents the cautious zone, and red-shaded area represents the critical zone (based on limit reference point [LRP] of 530 t; Nasmith et al. [2014]). (C) Median proportional exploitation rate estimates (black solid line) in relation to the removal reference (RR) of 0.15 (grey dotted line). The grey shaded region represents the upper and lower 95% credible intervals. (D) Median biomass estimates (tonnes) for recruit size Scallops (black solid line) in relation to the long-term median (LTM; 1983–2024) recruit biomass (grey dashed line). The shaded region represents the upper and lower 95% credible intervals.

Figure 8. Median proportional natural mortality rate estimates (black solid line) of Scallop from Scallop Production Area 4, in relation to respective long-term median (LTM; 1983–2024) natural mortality rates (grey dashed line). The grey shaded regions represent corresponding upper and lower 95% credible intervals.
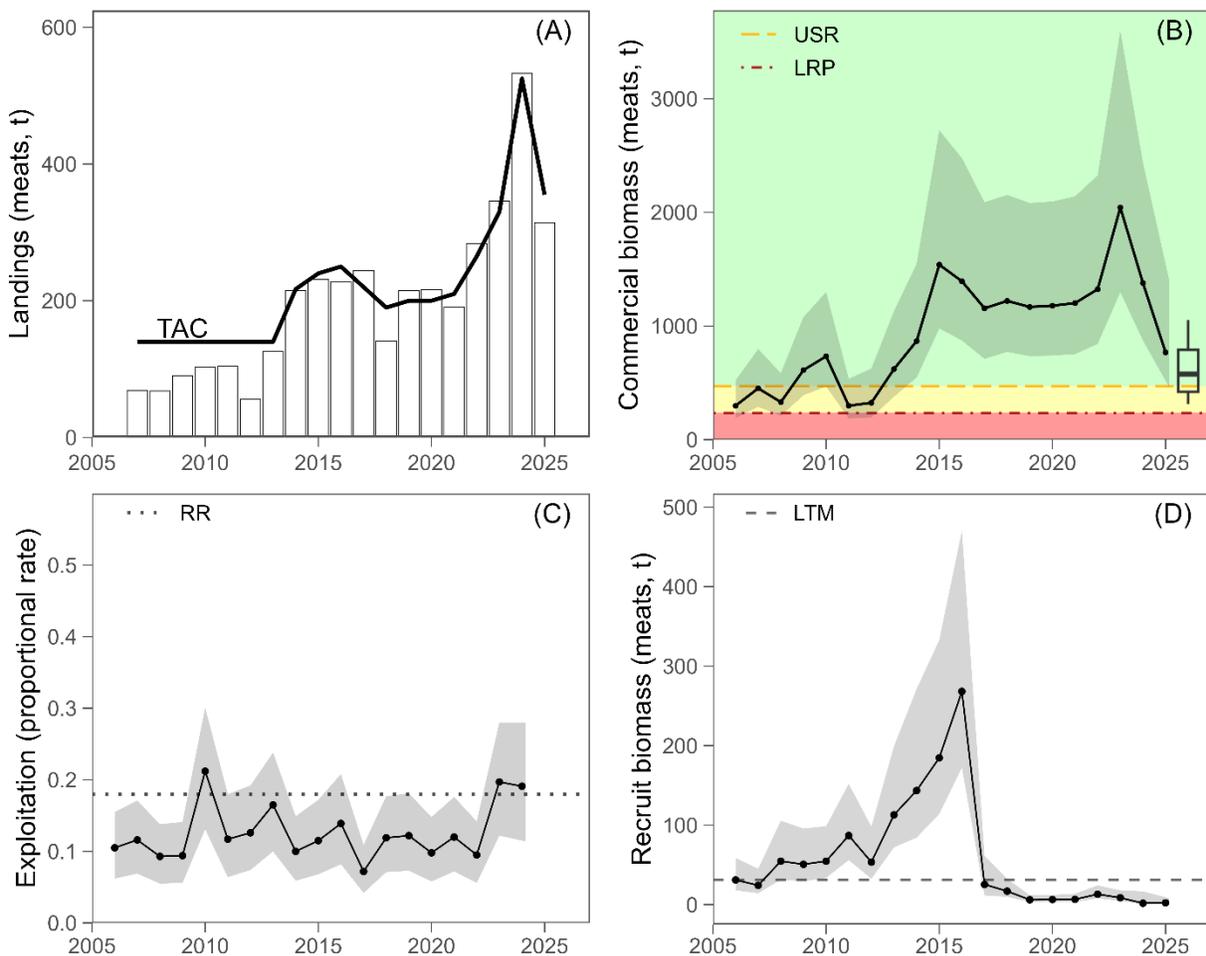
Figure 9. (A) Annual landings of Scallop meats (tonnes [t[) from Scallop Production Area (SPA) 6 between 2007 and 2025. The black solid line represents total allowable catch (TAC). (B) Median biomass estimates (solid line) in the SPA 6 modelled area for commercial size Scallops in meat weight (tonnes) from the assessment model fit to the survey and commercial data. The grey shaded region represents the upper and lower 95% credible intervals. The predicted commercial size biomass for 2026, assuming a catch of 173 t in the modelled area in 2026, is displayed as a box plot with median, 50% credible limits (box) and 80% credible limits (whiskers). The green-shaded area represents the healthy zone (based on an upper stock reference [USR] point of 471 t), the yellow-shaded area represents the cautious zone, and red-shaded area represents the critical zone (based on limit reference point [LRP] of 236 t). (C) Median proportional exploitation rate estimates (black solid line) in relation to the removal reference (RR) of 0.18 (grey dotted line). The grey shaded region represents the upper and lower 95% credible intervals. (D) Median biomass estimates (tonnes) for recruit size Scallops (black solid line) in relation to the long-term median (LTM; 2006–24) recruit biomass (grey dashed line). The shaded region represents the upper and lower 95% credible intervals.
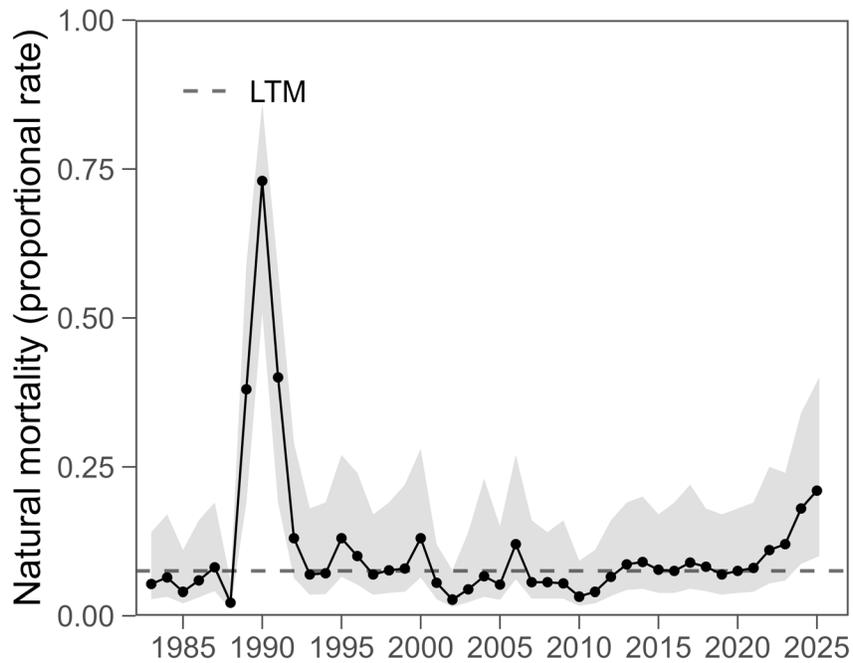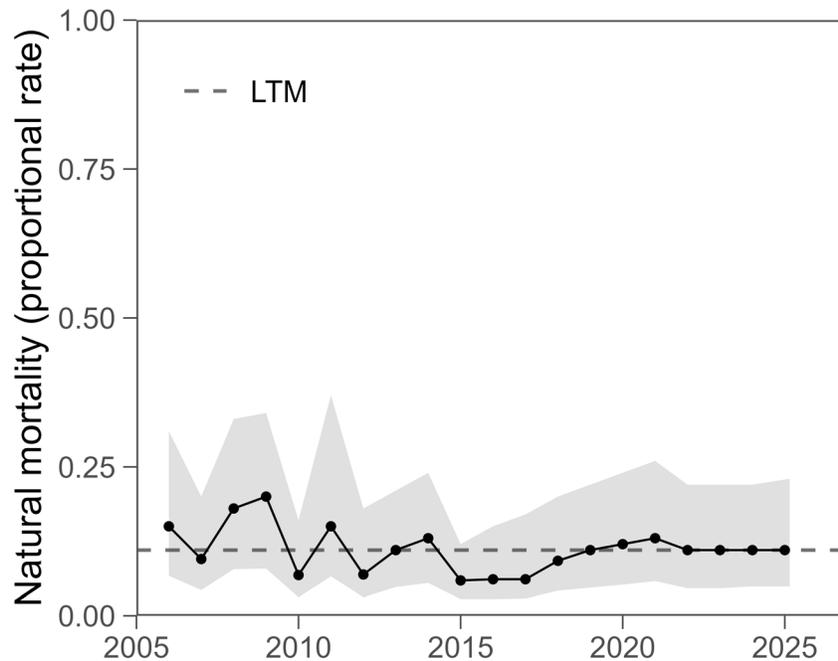
Figure 10. Median proportional natural mortality rate estimates (black solid line) of Scallop from Scallop Production Area 6, in relation to respective long-term median (LTM; 2006–24) natural mortality rates (grey dashed line). The grey shaded regions represent corresponding upper and lower 95% credible intervals.

Stock Status and Trends

Commercial Biomass

- Scallop Production Area 1A - Estimated commercial biomass has been variable and above the USR since 2001. Biomass declined from 2024 to 2025 from 2,813 t to 2,099 t (Figure 1B). The probability that biomass is currently above the USR and in the healthy zone is greater than 0.99. The probability that biomass is currently above the LRP is greater than 0.99.

- Scallop Production Area 1B - Estimated commercial biomass has been variable and above the USR since 1999. Biomass declined from 2024 to 2025 from 3,377 t to 2,595 t (Figure 3B). The probability that biomass is currently above the USR and in the healthy zone is 0.94. The probability that biomass is currently above the LRP is greater than 0.99.

- Scallop Production Area 3 - Estimated commercial biomass has been variable and above the USR since 2011. Biomass declined from 2024 to 2025 from 1,654 t to 1,110 t (Figure 5B). The probability that biomass is currently above the USR and in the healthy zone is 0.66. The probability that biomass is currently above the LRP is greater than 0.99.

- Scallop Production Area 4/5 - Estimated commercial biomass has been variable and above the USR since 2010. Biomass declined from 2024 to 2025 from 1,674 t to 1,028 t (Figure 7B). The probability that biomass is currently above the USR and in the healthy zone is 0.97. The probability that biomass is currently above the LRP is greater than 0.99.

- Scallop Production Area 6 - Estimated commercial biomass has been variable and above the USR since 2013. Biomass declined from 2024 to 2025 from 1,379 t to 769 t (Figure 9B).

The probability that biomass is currently above the USR and in the healthy zone is 0.97. The probability that biomass is currently above the LRP is greater than 0.99.

Recruit Biomass

- Scallop Production Area 1A - Recruit biomass has been below the long-term (1997–2024) median of 52 t since 2016. Recruit biomass increased slightly from 2024 to 2025 from 3 t to 4 t and is near the lowest observed value in the time-series (Figure 1D).

- Scallop Production Area 1B - Recruit biomass has varied above and below the long-term (1997–2024) median of 149 t for the time-series. Recruit biomass decreased from 2024 to 2025 from 45 t to 37 t and is at the lowest observed value in the time-series (Figure 3D).

- Scallop Production Area 3 - Recruit biomass has been at or below the long-term (1996–2024) median of 51 t since 2016. Recruit biomass increased slightly from 2024 to 2025 but remained at similar levels from 10 t to 11 t and is near the lowest observed value in the time-series (Figure 5D).

- Scallop Production Area 4/5 - Recruit biomass has remained below the long-term (1983–2024) median of 26 t since 2016. Recruit biomass increased slightly from 2024 to 2025 from 1 t to 3 t and is near the lowest observed value in the time-series (Figure 7D).

- Scallop Production Area 6 - Recruit biomass has been below the long-term (2006–2024) median of 35 t since 2017. Recruit biomass remained the same from 2024 to 2025 at 2 t and is near the lowest observed value in the time-series (Figure 9D).

Natural Mortality

- Scallop Production Area 1A - The proportional natural mortality rate has fluctuated between 0.04 and 0.28 throughout the time-series and has been trending upward since 2018 (Figure 2). Natural mortality increased from 2024 to 2025 from 0.18 to 0.22.

- Scallop Production Area 1B - The proportional natural mortality rate has fluctuated between 0.03 and 0.29 throughout the time series and has been trending upward since 2018 (Figure 4). Natural mortality increased from 2024 to 2025 from 0.17 to 0.29, which is the highest observed value in the time-series.

- Scallop Production Area 3 - The proportional natural mortality rate has fluctuated between 0.03 and 0.29 throughout the time-series and has been trending upward since 2018 (Figure 6). Natural mortality increased from 2024 to 2025 from 0.24 to 0.29, which is the highest observed value in the time-series.

- Scallop Production Area 4/5 - The proportional natural mortality rate has fluctuated between 0.03 and 0.21 since 1993 and has been increasing since 2019 (Figure 8). Natural mortality increased from 2024 to 2025 from 0.18 to 0.21.

- Scallop Production Area 6 - The proportional natural mortality rate has fluctuated between 0.06 and 0.20 throughout the time-series and has been at the long-term (2006–2024) median of 0.11 since 2022 (Figure 10).

Fishing Mortality

- Scallop Production Area 1A - Over the past decade (2015–2025) exploitation rates have ranged between 0.07 and 0.16, which is below and above the RR level of 0.15 (Figure 1C). Between 2024 and 2025, the realized proportional exploitation rate was 0.13.

- Scallop Production Area 1B - Over the past decade (2015–2025) exploitation rates have ranged between 0.09 and 0.18, which is below and above the RR level of 0.15 (Figure 3C). Between 2024 and 2025, the realized proportional exploitation rate was 0.13.

- Scallop Production Area 3 - Over the past decade (2015–2025) exploitation rates have ranged between 0.03 and 0.13, which is below the RR level of 0.15 (Figure 5C). Between 2024 and 2025, the realized proportional exploitation rate was 0.11.

- Scallop Production Area 4/5 - Over the past decade (2015–2025) exploitation rates have ranged between 0.06 and 0.14, which is below the RR level of 0.15 (Figure 7C). Between 2024 and 2025, the realized proportional exploitation rate was 0.13.

- Scallop Production Area 6 - Over the past decade (2015–2025) exploitation rates have ranged between 0.07 and 0.20, which is below and above the RR level of 0.18 (Figure 9C). Between 2024 and 2025, the realized proportional exploitation rate was 0.19.

Size Structure and Condition

The proportion of the population of Scallop with shell height greater than or equal to 80 millimetres (mm) in 2025 ranged between 0.90 and 0.99 indicating that the population is largely represented by older and larger Scallop (i.e., low to no recruitment and low growth potential). These high proportions indicate that the total population of Scallop in the BoF and Approaches is nearing the total population available and vulnerable to the fishery. In effect, removals are not just from a fraction of the population, but from the entire population. This limited size distribution of older animals suggests the population may have limited resilience to disturbance.

From 2024 to 2025, Scallop condition (meat weight given shell height), as measured by the Bay of Fundy Inshore Scallop Survey, declined across all SPAs from 4% (SPA 3) to 30% (SPA 6). Condition values in 2025 for all SPAs were below their respective long-term medians and were 10.3 grams (g), 10.3 g, 10.0 g, 10.3 g and 8.9 g for SPAs 1A, 1B, 3, 4/5 and 6, respectively.

Current Status

- Scallop Production Area 1A - The 2025 median commercial biomass estimate of 2,099 t is above the USR, with a greater than 0.99 probability of being in the healthy zone.

- Scallop Production Area 1B - The 2025 median commercial biomass estimate of 2,595 t is above the USR, with a 0.94 probability of being in the healthy zone.

- Scallop Production Area 3 - The 2025 median commercial biomass estimate of 1,110 t is above the USR, with a 0.66 probability of being in the healthy zone.

- Scallop Production Area 4/5 - The 2025 median commercial biomass estimate of 1,028 t is above the USR, with a 0.97 probability of being in the healthy zone.

- Scallop Production Area 6 - The 2025 median commercial biomass estimate of 769 t is above the USR, with a 0.97 probability of being in the healthy zone.

History of Management, Landings, and TAC

Harvesting of Sea Scallop in the BoF and Approaches is comprised of commercial (including communal commercial) and FSC harvesting. There are three commercial fleets (Full Bay, Mid Bay, and Upper Bay) in the inshore BoF Scallop fishery. Full Bay license holders are permitted to fish throughout the BoF. Mid Bay license holders have access to all areas north of the Mid Bay line. Upper Bay license holders are restricted to the upper reaches of the Bay (Figure A1). The fishery is managed using limited entry, drag gear size limits, seasonal closures, minimum

shell height, and meat count. The drag gear width limit is 5.5 metres with a ring size of not less than 82 mm inside diameter. The Full Bay Fleet operates under an Individual Transferable Quota (ITQ) system, while the Mid Bay and Upper Bay fleets fish with competitive quotas. Total Allowable Catches (TACs) and landings are reported in terms of meat weights (adductor muscles) (Table 2). Landings from FSC harvest do not count against the TAC and TAC values are pre-quota reconciliation.

Table 2. Total Allowable Catch (TAC), Commercial Scallop fishery landings, and landings for communal Food, Social and Ceremonial purposes (FSC) by First Nations (meats, tonnes [t]) for Scallop Production Areas (SPAs) in the Bay of Fundy from the 2022–23 fishing season to the 2024–25 fishing season. Landings from FSC harvest do not count against the TAC and TAC values are pre-quota reconciliation. Landing values in the 2025–26 fishing season are preliminary (as of October 15, 2025). Dash (—) indicates no catch. * indicates preliminary data.

Season	SPA	TAC (t)	Landings (t)	FSC (t)	Total Landings (t)
2022–23	1A	375	390.9	—	390.9
	1B	550	545.8	—	545.8
	3	135	144.5	—	144.5
	4/5	190	195.4	—	195.4
	6	330	333.6	12.2	345.8
2023–24	1A	500	505.7	—	505.7
	1B	700	735.7	3.4	739.0
	3	200	151.8	—	151.8
	4/5	275	271.0	—	271.0
	6	525	523.3	9.1	532.5
2024–25*	1A	315	315.8	—	315.8
	1B	425	376.5	4.7	381.2
	3	130	134.0	—	134.0
	4/5	160	150.7	—	150.7
	6	355	305.8	8.6	314.4

Projections

Catch scenarios for the 2025–26 fishing season are presented in Tables 3–7. Biomass projections assume the current year (2025) estimates of growth and that natural mortality is the average over the last 5 years (2021–2025) for each SPA.

Scallop Production Area 1A

Table 3 is interpreted as follows; a catch of 25 t corresponds to an exploitation of 0.01 and is projected to result in a 13% decline in commercial biomass, the probability of commercial biomass increase is 30%, the probability that a catch of 25 t will result in the population remaining above the LRP is greater than 99%, and the probability of the population remaining above the USR is 96%. In the following fishing year (2026–27), a catch of 175 t would have a probability of 10% of exceeding a RR exploitation of 0.15.

Table 3. Harvest scenario table for Scallop Production Area 1A to evaluate 2025–26 catch levels (tonnes [t]) in terms of resulting exploitation (e), expected changes in commercial biomass (%), probability (Pr) of commercial biomass increase, probability that after removal the stock will be above the Limit Reference Point (LRP; 480 t) and above the Upper Stock Reference (USR; 1,000 t). Potential catches (t) in 2026–27 are evaluated in terms of the posterior probability of exceeding a removal reference exploitation of 0.15. (>) indicates greater than.

2025–26 Fishing Season						2026–27 Fishing Season					
Catch (t)	e	% Change	Pr Increase	Pr > LRP	Pr > USR	Probability Exploitation > 0.15 Potential Catch (t)					
						0.1	0.2	0.3	0.4	0.5	0.6
0	0.00	-12	0.32	> 0.99	0.96	178	209	233	256	279	306
25	0.01	-13	0.30	> 0.99	0.96	175	205	230	253	276	302
50	0.03	-14	0.29	> 0.99	0.95	172	203	228	250	273	298
75	0.04	-15	0.27	> 0.99	0.95	171	200	224	247	270	295
100	0.05	-17	0.26	> 0.99	0.94	168	197	220	243	266	291
125	0.07	-18	0.24	> 0.99	0.94	166	195	218	240	263	288
150	0.08	-18	0.23	> 0.99	0.93	163	192	215	238	260	285
175	0.09	-19	0.21	> 0.99	0.93	161	189	212	234	256	281
200	0.11	-21	0.20	> 0.99	0.92	158	186	209	230	252	276
225	0.12	-22	0.19	> 0.99	0.92	156	184	206	227	249	273
250	0.13	-23	0.17	> 0.99	0.91	153	181	204	225	246	269
275	0.15	-24	0.16	> 0.99	0.90	150	178	200	221	243	267

Scallop Production Area 1B

See Scallop Production Area 1A Projections section in this document for an example of interpreting Table 4 below.

Table 4. Harvest scenario table for Scallop Production Area 1B to evaluate 2025–26 catch levels (tonnes [t]) in terms of resulting exploitation (e), expected changes in commercial biomass (%), probability (Pr) of commercial biomass increase, probability that after removal the stock will be above the Limit Reference Point (LRP; 880 t) and above the Upper Stock Reference (USR; 1,800 t). Potential catches (t) in 2026–27 are evaluated in terms of the posterior probability of exceeding a removal reference exploitation of 0.15. (>) indicates greater than.

2025–26 Fishing Season						2026–27 Fishing Season					
Catch (t)	e	% Change	Pr Increase	Pr > LRP	Pr > USR	Probability Exploitation > 0.15 Potential Catch (t)					
						0.1	0.2	0.3	0.4	0.5	0.6
0	0.00	-10	0.32	> 0.99	0.79	230	267	297	325	353	384
25	0.01	-11	0.30	> 0.99	0.78	228	264	293	321	349	381
50	0.02	-11	0.29	> 0.99	0.77	225	262	291	319	346	376
75	0.03	-12	0.27	> 0.99	0.76	221	258	287	315	343	374
100	0.04	-13	0.25	> 0.99	0.75	220	255	284	311	339	370
125	0.05	-14	0.24	> 0.99	0.74	217	253	282	309	336	366
150	0.06	-15	0.23	> 0.99	0.73	214	250	278	305	332	363
175	0.07	-16	0.21	0.99	0.72	211	246	275	302	329	359
200	0.08	-16	0.20	0.99	0.71	208	243	272	299	326	357
225	0.10	-18	0.19	0.99	0.69	205	240	268	295	322	353
250	0.11	-18	0.17	0.99	0.68	203	238	266	292	320	349
275	0.12	-19	0.16	0.99	0.67	201	235	262	289	316	346
300	0.13	-20	0.15	0.99	0.66	197	231	259	285	313	342
325	0.14	-21	0.14	0.99	0.65	194	228	256	282	309	338
350	0.15	-22	0.13	0.99	0.63	191	225	253	279	306	335

Scallop Production Area 3

See Scallop Production Area 1A Projections section in this document for an example of interpreting Table 5 below.

Table 5. Harvest scenario table for Scallop Production Area 3 to evaluate 2025–26 catch levels (tonnes [t]) in terms of resulting exploitation (e), expected changes in commercial biomass (%), probability (Pr) of commercial biomass increase, probability that after removal the stock will be above the Limit Reference Point (LRP; 600 t) and above the Upper Stock Reference (USR; 1,000 t). Potential catches (t) in 2026–27 are evaluated in terms of the posterior probability of exceeding a removal reference exploitation of 0.15. (>) indicates greater than.

2025–26 Fishing Season						2026–27 Fishing Season					
						Probability Exploitation > 0.15					
						Potential Catch (t)					
Catch (t)	e	% Change	Pr Increase	Pr > LRP	Pr > USR	0.1	0.2	0.3	0.4	0.5	0.6
0	0.00	-17	0.25	0.88	0.43	86	102	115	127	140	154
10	0.01	-18	0.24	0.87	0.42	85	100	114	126	139	153
20	0.02	-19	0.23	0.87	0.41	84	100	113	125	138	152
30	0.03	-19	0.22	0.86	0.40	83	98	111	124	136	150
40	0.04	-20	0.21	0.85	0.40	82	98	111	123	135	149
50	0.05	-21	0.20	0.85	0.39	81	96	109	121	134	148
60	0.06	-22	0.19	0.84	0.37	80	95	108	120	132	146
70	0.07	-22	0.19	0.83	0.37	79	95	107	119	131	145
80	0.08	-23	0.17	0.82	0.36	78	93	106	118	130	144
90	0.10	-24	0.16	0.82	0.35	77	92	105	117	129	142
100	0.11	-24	0.16	0.81	0.34	76	91	104	115	128	141
110	0.12	-25	0.15	0.80	0.33	76	90	102	114	126	139
120	0.13	-26	0.14	0.79	0.32	74	89	101	113	125	138
130	0.14	-27	0.13	0.79	0.31	73	88	100	112	124	137
140	0.15	-27	0.12	0.78	0.31	73	87	99	110	122	135

Scallop Production Area 4/5

See Scallop Production Area 1A Projections section in this document for an example of interpreting Table 6 below.

Table 6. Harvest scenario table for Scallop Production Area 4/5 to evaluate 2025–26 catch levels (tonnes [t]) in terms of resulting exploitation (e), expected changes in commercial biomass (%), probability (Pr) of commercial biomass increase, probability that after removal the stock will be above the Limit Reference Point (LRP; 530 t) and above the Upper Stock Reference (USR; 750 t). Potential catches (t) in 2026–27 are evaluated in terms of the posterior probability of exceeding a removal reference exploitation of 0.15. (>) indicates greater than.

2025–26 Fishing Season						2026–27 Fishing Season					
						Probability Exploitation > 0.15					
						Potential Catch (t)					
Catch (t)	e	% Change	Pr Increase	Pr > LRP	Pr > USR	0.1	0.2	0.3	0.4	0.5	0.6
0	0.00	-10	0.38	0.93	0.72	86	102	115	128	141	155
10	0.01	-10	0.37	0.93	0.72	86	102	115	127	140	154
20	0.02	-11	0.36	0.93	0.71	85	101	114	126	139	153
30	0.03	-12	0.35	0.92	0.70	83	99	112	125	137	151
40	0.04	-13	0.34	0.92	0.69	82	98	111	123	135	150
50	0.05	-14	0.32	0.91	0.68	82	97	110	122	135	148
60	0.06	-15	0.31	0.91	0.67	81	96	109	121	133	147
70	0.07	-16	0.30	0.90	0.66	80	95	107	119	132	145

2025–26 Fishing Season						2026–27 Fishing Season					
Catch (t)	e	% Change	Pr Increase	Pr > LRP	Pr > USR	Probability Exploitation > 0.15 *Potential Catch (t)*					
						0.1	0.2	0.3	0.4	0.5	0.6
80	0.08	-16	0.29	0.90	0.65	79	94	106	118	130	144
90	0.10	-17	0.28	0.89	0.64	78	93	105	116	129	143
100	0.11	-18	0.27	0.89	0.63	77	92	104	115	127	140
110	0.12	-19	0.26	0.88	0.62	76	90	103	114	126	139
120	0.13	-20	0.25	0.87	0.60	75	89	101	113	124	137
130	0.14	-21	0.24	0.87	0.59	74	88	100	111	123	136
140	0.15	-22	0.23	0.86	0.58	74	88	99	110	122	135

Scallop Production Area 6

SPA 6 does not have an interim TAC; the biomass projections assume the same proportion of catch in the modelled area as the current year. Catch scenarios for 2025–26 are presented in Table 7. Table 7 is interpreted as follows, a catch of 9 t in the modelled area of SPA 6 corresponds to an exploitation of 0.01 and is projected to result in a 5% decline in commercial biomass in the modelled area, the probability of commercial biomass increase in the modelled area is 43%. The probability that a catch of 9 t will result in the population remaining above the LRP is 99%, and the probability of the population remaining above the USR is 86%. Conditional on the proportion of catch from the modelled area staying the same in 2026 as in 2025 (55%), a catch of 9 t from the modelled area would correspond to a total SPA 6 catch of 16 t.

Table 7. Harvest scenario table for the Scallop Production Area 6 modelled area to evaluate 2025–26 catch levels (tonnes [t]) in terms of resulting exploitation (e), expected changes in commercial biomass (%), probability (Pr) of commercial biomass increase, and the probability that after removal the stock will be above the Limit Reference Point (LRP; 236 t) and above the Upper Stock Reference (USR; 471 t). Corresponding catch levels for the whole area of SPA 6 are conditional on the proportion of catch from the modelled area staying the same in 2026 as in 2025 (55%). (>) indicates greater than.

2025–26 Fishing Season						
Modelled Area						Whole Area
Catch (t)	e	% Change	Pr Increase	Pr > LRP	Pr > USR	Catch (t)
0	0.00	-4	0.45	> 0.99	0.87	0
9	0.01	-5	0.43	0.99	0.86	16
18	0.02	-6	0.41	0.99	0.86	33
27	0.04	-7	0.40	0.99	0.84	49
36	0.05	-9	0.38	0.99	0.84	65
45	0.06	-10	0.36	0.99	0.83	82
54	0.07	-11	0.35	0.99	0.82	98
63	0.08	-12	0.33	0.99	0.81	115
72	0.10	-13	0.32	0.99	0.80	131
81	0.11	-14	0.30	0.99	0.79	147
90	0.12	-16	0.28	0.99	0.78	164
99	0.13	-17	0.27	0.99	0.77	180
108	0.14	-18	0.26	0.98	0.76	196
117	0.16	-19	0.24	0.98	0.75	213
126	0.17	-20	0.23	0.98	0.74	229
135	0.18	-21	0.21	0.98	0.72	245

Ecosystem and Climate Change Considerations

At sea observer coverage for the Scallop fishery in SPAs 1–6 is currently not mandated by DFO. Refer to Sameoto and Glass (2012) for past analysis of discards from the Inshore Scallop fishery.

Sea Scallops are largely sedentary molluscs and are susceptible to climate change stressors such as rising bottom temperatures and ocean acidification, which affect Scallop physiology and growth (Rheuban et al. 2018). Annual growth rates are calculated using a combination of Scallop condition and expected shell growth (Nasmith et al. 2016). Large interannual shifts in condition have been shown to cause substantial changes in biomass estimates without corresponding changes in abundance (DFO 2024; Hebert et al. 2025). Observations of significant interannual changes in Scallop condition are likely driven by variability in environmental conditions (Laing 2000; Liu et al. 2021).

SOURCES OF UNCERTAINTY

Biomass projections use the current year estimates of growth, whereas natural mortality is the average over the last 5 years. Annual growth rates are calculated using a combination of Scallop condition and expected shell growth. Large interannual shifts in condition have been shown to cause substantial changes in biomass estimates without corresponding changes in abundance (DFO 2024; Hebert et al. 2025). If condition or growth change in 2026, the biomass projections (and consequent decision table probabilities) would be affected.

Scallop removals include commercial (including communal commercial) landings and FSC catch by Scallop drag from individual SPAs in the BoF and Approaches. Landed recreational and FSC catch by dip netting, diving, tongs, and hand are not available and not accounted for in the assessment. For information on Recreational catch see Sameoto et al. (2022).

LIST OF MEETING PARTICIPANTS

Name	Affiliation
Jessica Sameoto (co-lead)	DFO Science, Maritimes Region
Brittany Wilson (co-lead)	DFO Science, Maritimes Region
Jamie Raper	DFO Science, Maritimes Region
Greg English	DFO Science, Maritimes Region
David Keith	DFO Science, Maritimes Region
Leslie Nasmith	DFO Science, Maritimes Region
Liza Tsitrin	DFO Science, Maritimes Region
Manon Cassista-Da Ros	DFO Science, Maritimes Region
Corinne Pomerleau	DFO Science, Maritimes Region
Alan Reeves	DFO Resource Management, Maritimes Region
Chris Connell	DFO Resource Management, Maritimes Region
Muhammad (Yamin) Janjua	DFO Science, National Capital Region
Kristian Curran	DFO Science, National Capital Region
Shannan Murphy	DFO Science, National Capital Region

SOURCES OF INFORMATION

DFO. 2007. Stock Assessment Report on Scallops (*Placopecten magellanicus*) in Scallop Production Areas 1 to 6 in the Bay of Fundy. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2007/013.

DFO. 2016. Assessment of Scallops (*Placopecten magellanicus*) in Scallop Production Areas 1 to 6 in the Bay of Fundy. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2016/004.

DFO. 2024. Scallop (*Placopecten Magellanicus*) in Scallop Production Areas 1 to 6 in the Bay of Fundy. DFO Can. Sci. Advis. Sec. Sci. Resp. 2024/005.

DFO. 2025. Stock Status Update of Scallop (*Placopecten magellanicus*) in Scallop Production Areas 1 to 6 in the Bay of Fundy. DFO Can. Sci. Advis. Sec. Sci. Resp. 2025/006.

Hebert, N.E., Sameoto, J.A., Keith, D.M., Murphy, O.A., Brown, C.J., Mills Flemming, J. 2025. Interannual variability in the length–weight relationship can disrupt the abundance–biomass correlation of sea scallop (*Placopecten magellanicus*). ICES J. Mar. Sci. 82(10).

Laing, I. 2000. *Effect of temperature and ration on growth and condition of king scallop (Pecten maximus) spat.* Aquaculture. 183(3): 325–334.

Liu, X., Devred, E., Johnson, C.L., Keith, D., and Sameoto, J.A. 2021. Using satellite remote sensing to improve the prediction of scallop condition in their natural environment: Case study for Georges Bank, Canada. Remote Sensing Environment. 254: 112251.

Nasmith, L., Hubley, B., Smith, S.J., and Glass, A. 2014. Scallop Production Areas in the Bay of Fundy: Stock Status for 2013 and Forecast for 2014. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/016: vii + 139 p.

Nasmith, L., Sameoto, J.A., and Glass, A. 2016. Scallop Production Areas in the Bay of Fundy: Stock Status for 2015 and Forecast for 2016. DFO Can. Sci. Advis. Sec. Res. Doc. 2016/021. vi + 140 p.

Rheuban, J.E., Doney, S.C., Cooley, S.R., and Hart, D.R. 2018. Projected impacts of future climate change, ocean acidification, and management on the US Atlantic sea scallop (*Placopecten magellanicus*) fishery. PLoS ONE. 13(9): e0203536.

Sameoto, J.A., and Glass, A. 2012. An Overview of Discards from the Canadian Inshore Scallop Fishery in SFA 28 and SFA 29 West for 2002 to 2009. Can. Tech. Rep. Fish. Aquat. Sci. 2979. vi + 39 p.

Sameoto, J.A., Pearo Drew, T.K., Raper, J., and Reeves, A. 2022. A summary of recreational scallop fishing in the Maritimes Region: 1998 to 2015. Can. Tech. Rep. Fish. Aquat. Sci. 3451: v + 29 p.

Smith, S.J., and Hubley, B. 2014. Impact of survey design changes on stock assessment advice: Sea scallops. ICES J. Mar. Sci. 71(2): 320–327.

Smith, S.J., Hubley, B., Nasmith, L., Sameoto, J., Bourdages, H., and Glass, A. 2012. Scallop Production Areas in the Bay of Fundy: Stock Status for 2011 and Forecast for 2012. DFO Can. Sci. Advis. Sec. Res. Doc. 2012/009: vii +123 p.
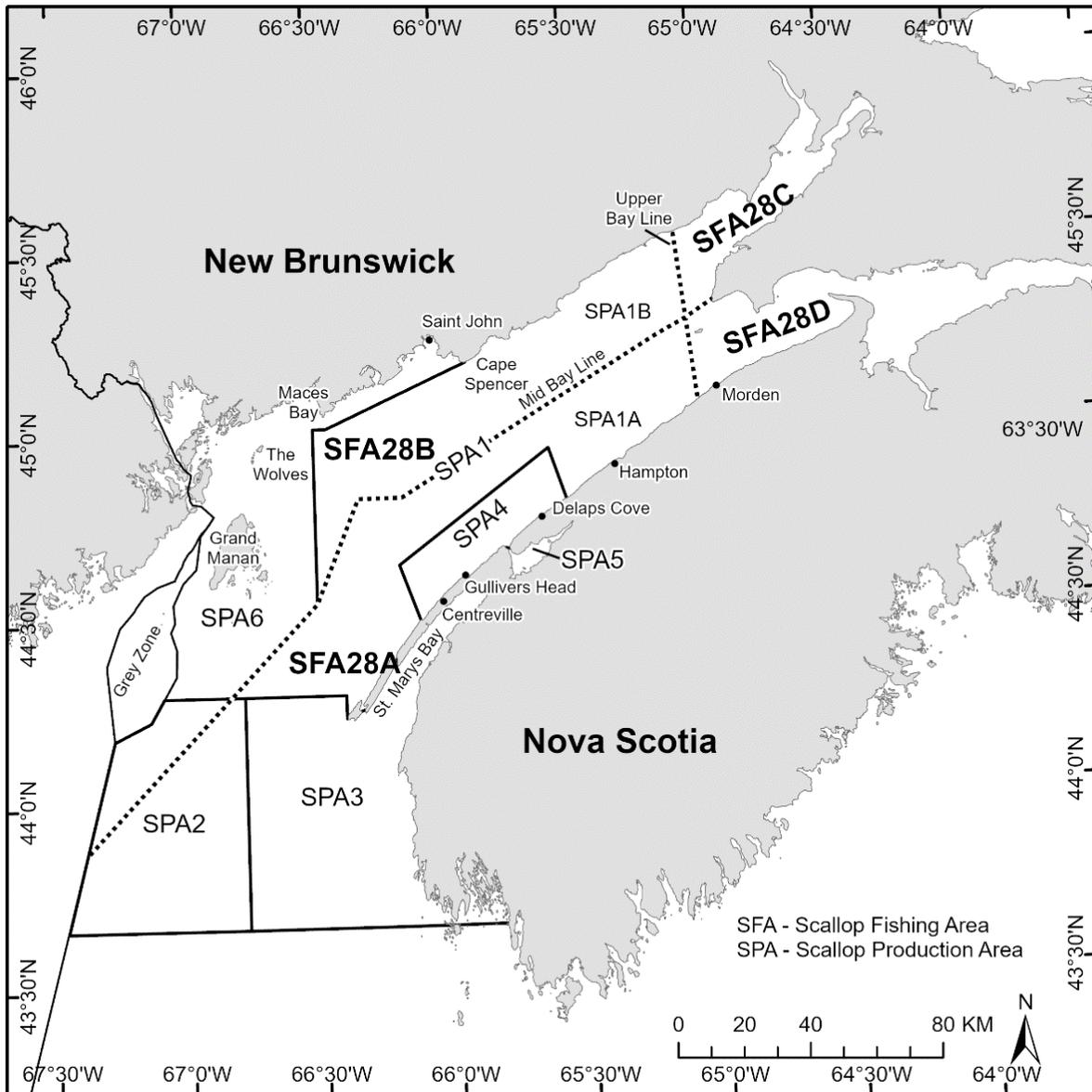
APPENDIX

Figure A1. Map of Scallop Production Areas (SPAs) within Scallop Fishing Areas (SFAs) 28 A–D in the Bay of Fundy (BoF) and Approaches. There are three commercial fleets (Full Bay, Mid Bay, and Upper Bay) in the inshore BoF Scallop fishery. Full Bay license holders are permitted to fish throughout the BoF. Mid Bay license holders have access to all areas north of the Mid Bay line. Upper Bay license holders are restricted to the upper reaches of the Bay.

THIS REPORT IS AVAILABLE FROM THE:

Correct Citation for this Publication:

DFO. 2026. Stock Status Update of Scallop (*Placopecten magellanicus*) in Scallop Production Areas 1 to 6 in the Bay of Fundy. DFO Can. Sci. Advis. Sec. Sci. Resp. 2026/004.

Aussi disponible en français :

*MPO. 2026. Mise à jour de l'état du stock de pétoncles (*Placopecten magellanicus*) des zones de production de pétoncles 1 à 6 de la baie de Fundy. Secr. can. des avis sci. du MPO. Rép. des Sci. 2026/004.*