Figure 1—Seasonal evolution of salinity at Utqiaġvik during the growth season for (a) observations and (b) CICE model simulations. Freezing degree days (FDD) refer to the growth season. The mean envelope, i.e. mean ±1 standard deviation, is shown as the thick black line with the gray area with the minimal and maximal value at each depth represented by the red and blue line, respectively.
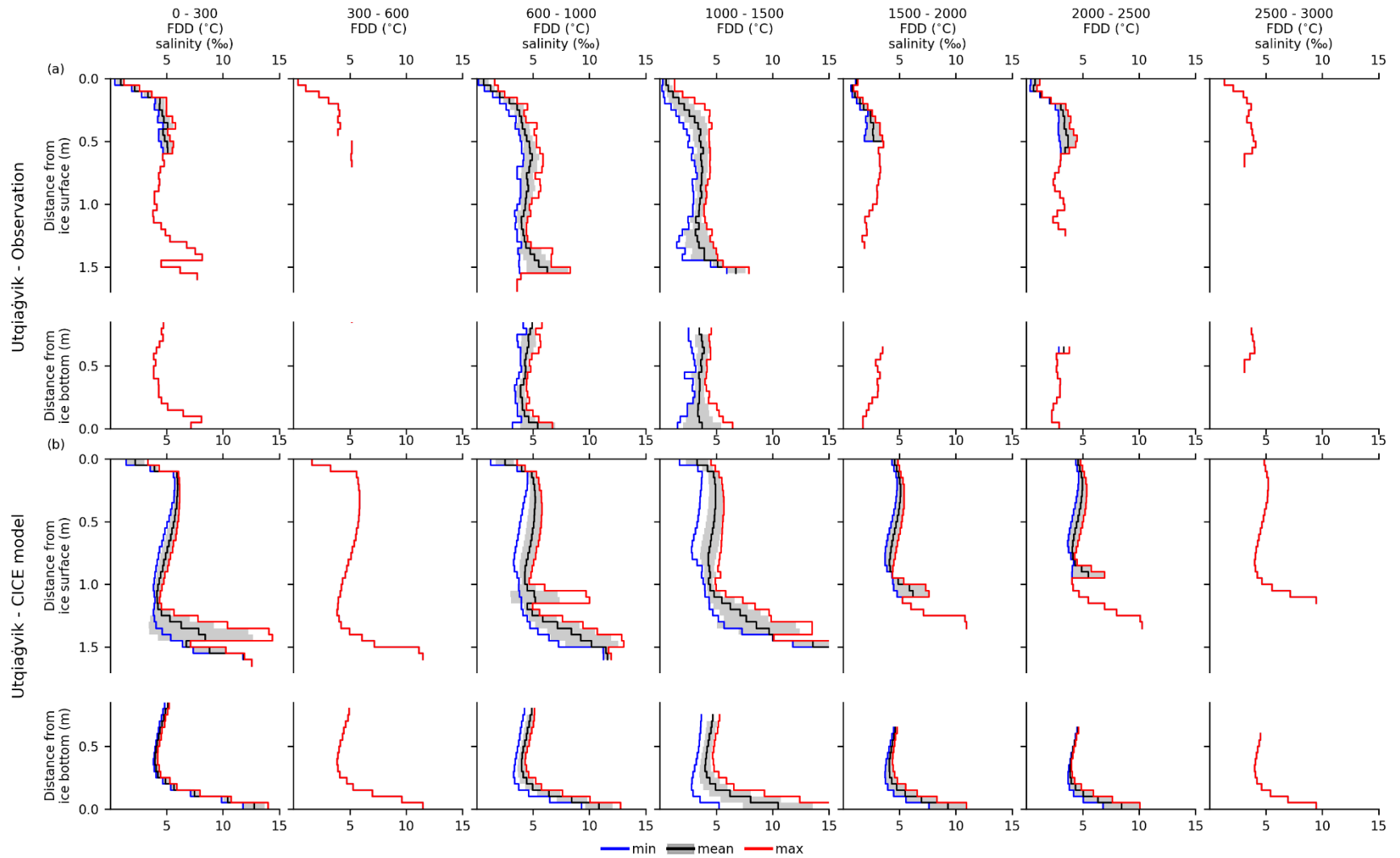
Figure 2—Seasonal evolution of salinity in Utqiaġvik during the melt season for (a) observation and (b) CICE model simulation. Thawing degree days (TDD) refer to the melt season. The mean envelope, i.e. mean ±1 standard deviation, is shown as the thick black line with the gray area with the minimal and maximal value at each depth represented by the blue and red line, respectively.
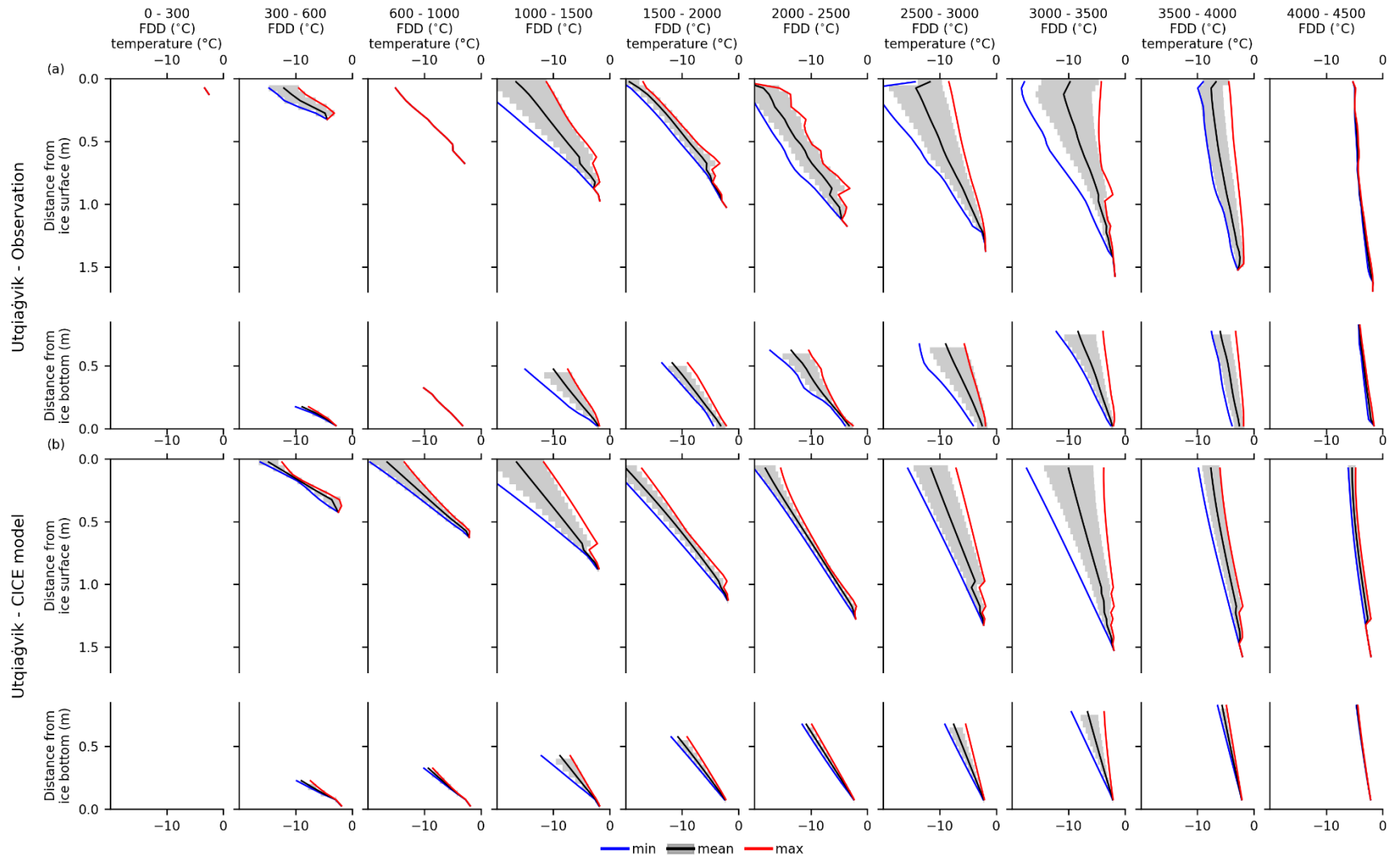
Figure 3—Seasonal evolution of temperature at Utqiaġvik during the growth season for (a) observation and (b) CICE model simulation. Freezing degree days (FDD) refer to the melt season. The mean envelope, i.e. mean ±1 standard deviation, is shown as the thick black line with the gray area with the minimal and maximal value at each depth represented by the blue and red line, respectively.
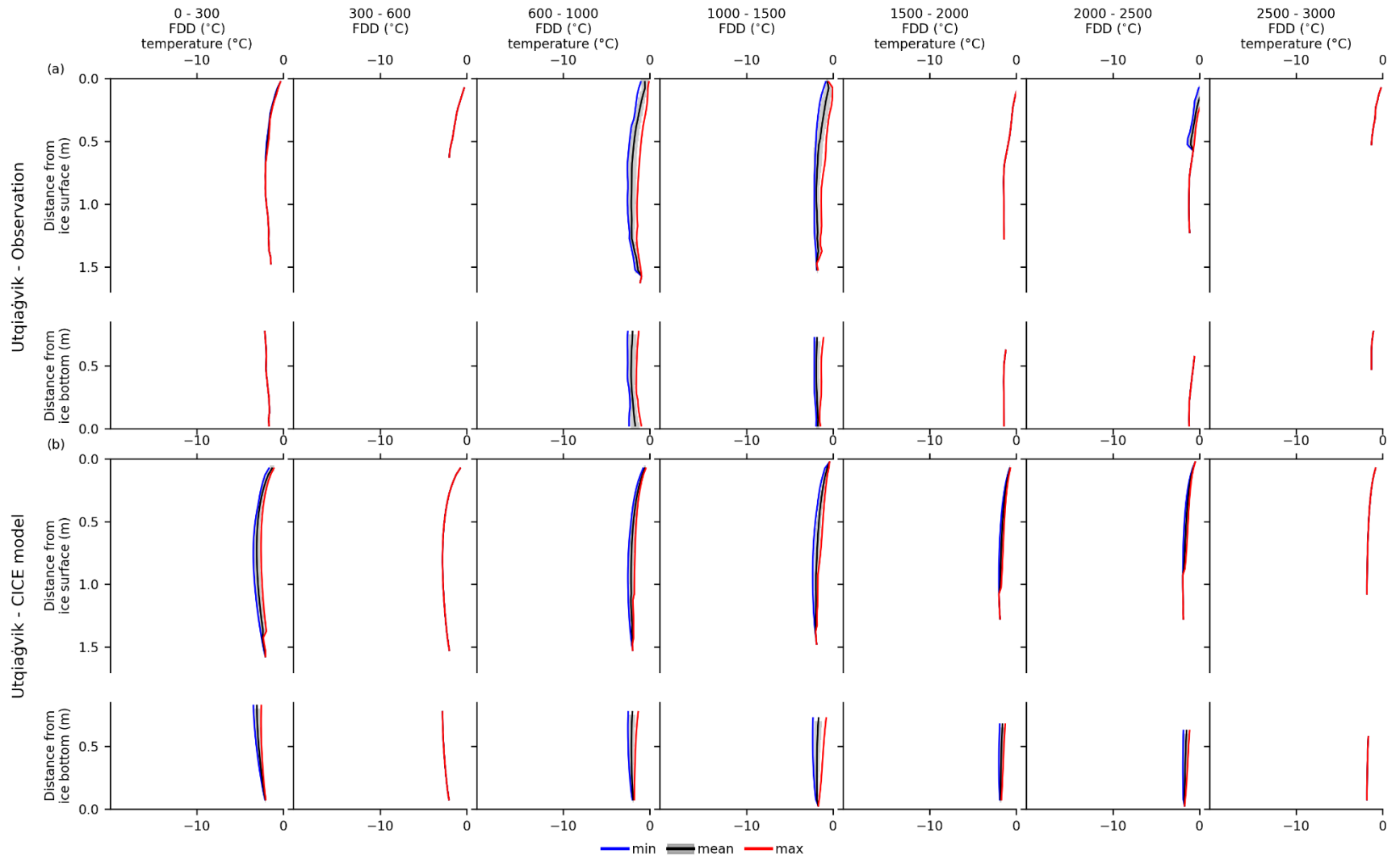
Figure 4—Seasonal evolution of temperature at Utqiaġvik during the melt season for (a) observation and (b) CICE model simulation. Thawing degree days (TDD) refer to the melt season. The mean envelope, i.e. mean ±1 standard deviation, is shown as the thick black line with the gray area with the minimal and maximal value at each depth represented by the blue and red line, respectively.
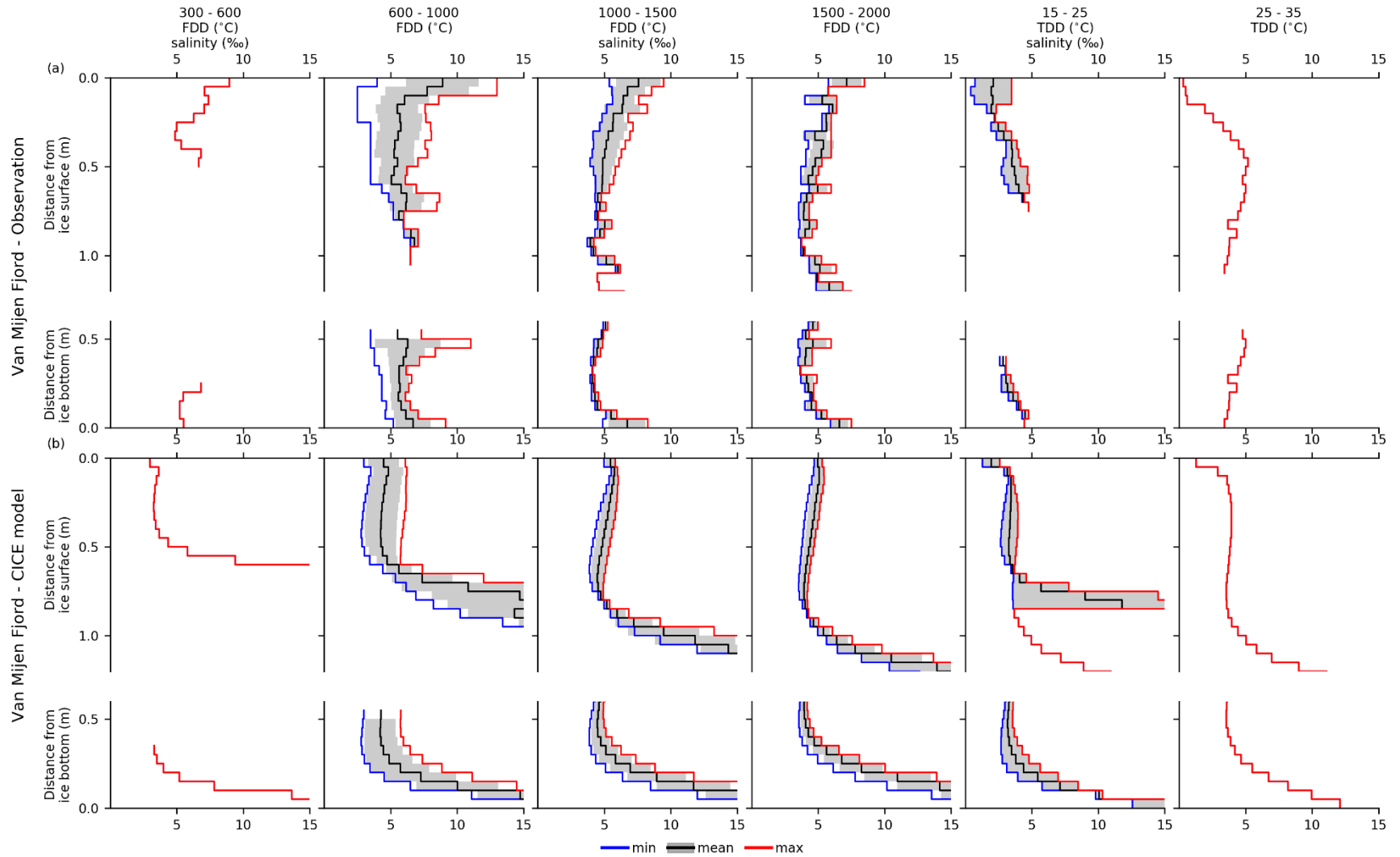
Figure 5—Seasonal evolution of salinity in during the growth (FDD) and melt (TDD) seasons for (a) observation and (b) CICE model simulation. Freezing degree days (FDD) refer to the growth season, while freezing degree days (TDD) indicate melt season. The mean envelope, i.e. mean ±1 standard deviation, is shown as the thick black line with the gray area with the minimal and maximal value at each depth represented by the blue and red line, respectively.
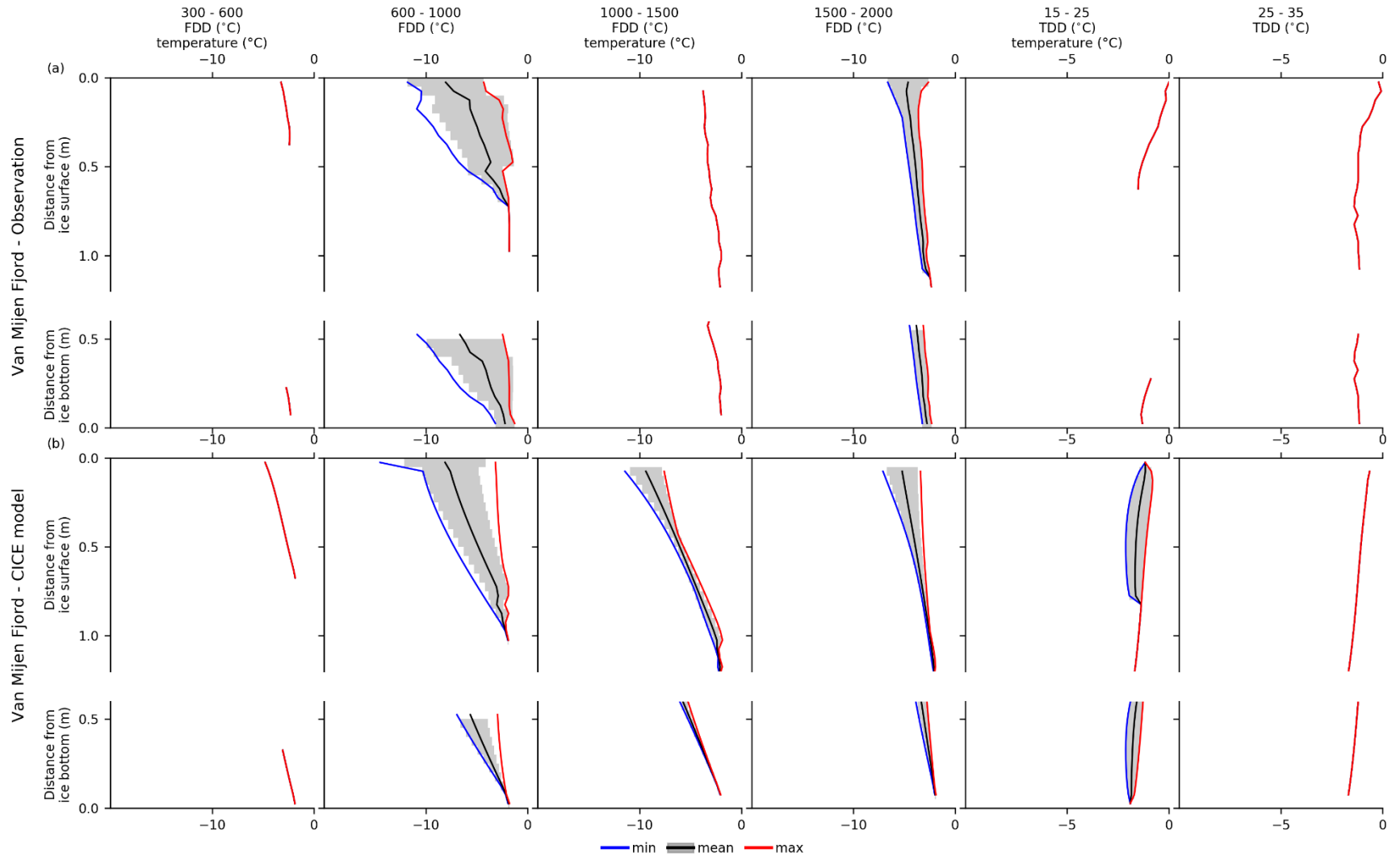
Figure 6—Seasonal evolution of salinity in Van Mijen Fjord during the growth (FDD) and melt (TDD) seasons for (a) observation and (b) CICE model simulation. Freezing degree days (FDD) refer to the growth season, while freezing degree days (TDD) indicate melt season. The mean envelope, i.e. mean ±1 standard deviation, is shown as the thick black line with the gray area with the minimal and maximal value at each depth represented by the blue and red line, respectively.