Carbon dioxide contribution to warming between Pond Inlet and Amsterdam

CO_2
Pond Inlet, Canada, Dec 30, 2023
Temperature = -18 °C,
Relative humidity = 84%
Moist air enthalpy = -16.5 kJ
Specific volume = 0.725 m^3 /kg dry air
CO_2 = 418.06 ppm
        = 0.000418 x 44 x (1000/29)
        = 0.630 grams/kg dry air

CO_2
Amsterdam, Netherlands, Dec 30, 2023
Temperature = 8 °C,
Relative humidity = 87%
Moist air enthalpy = +22.7 kJ
Specific volume = 0.797 m^3 /kg dry air
CO_2 = 0.630 x (0.725/0.797)
= 0.577 grams/kg dry air

CO_2
Difference in temperature, Pond Inlet to Amsterdam
= (-18 + 8) = 26° C
kJ from CO_2 Pond Inlet to Amsterdam
= (0.577/1000) x 0.833 x 26
= 0.00125 kJ

CO_2
Moist air enthalpy difference
Pond Inlet to Amsterdam
= (16.5 + 22.7) = 39.2 kJ

= (39.2/26) = 1.508 kJ/ °C

CO_2 contribution to 26 °C
= 0.00125/1.508
= 0.0083 °C