

***Ambio***

Electronic Supplementary Material

*This supplementary material has not been peer reviewed*

Title: **Impact of Climate Change and Seasonal Trends on the Fate of Arctic Oil Spills**

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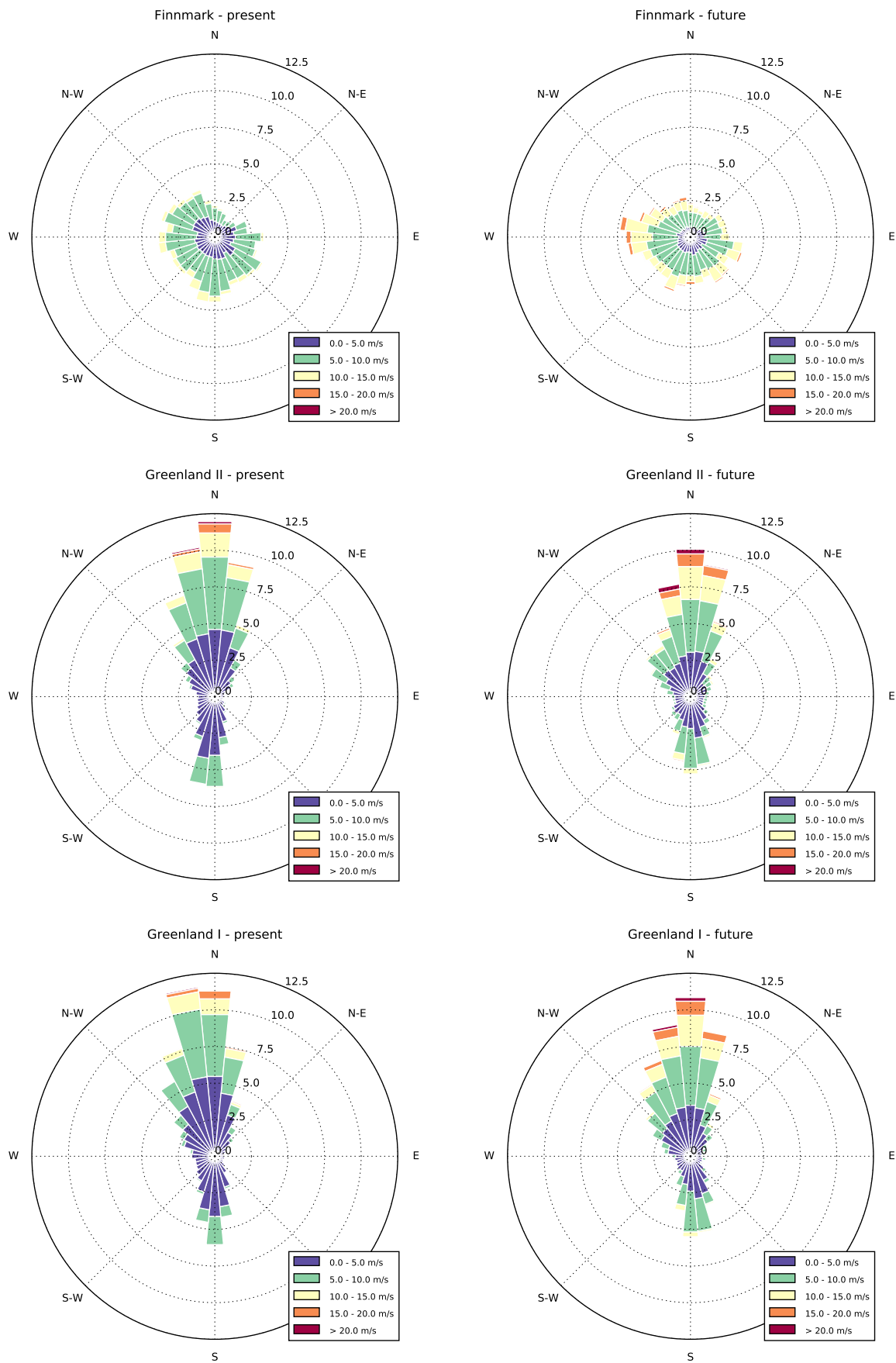


Figure S1: Wind roses showing comparison of wind conditions at the release point for each scenario, with present conditions on the left, and future conditions on the right. The length of each sector indicates the relative frequency of wind in that direction.

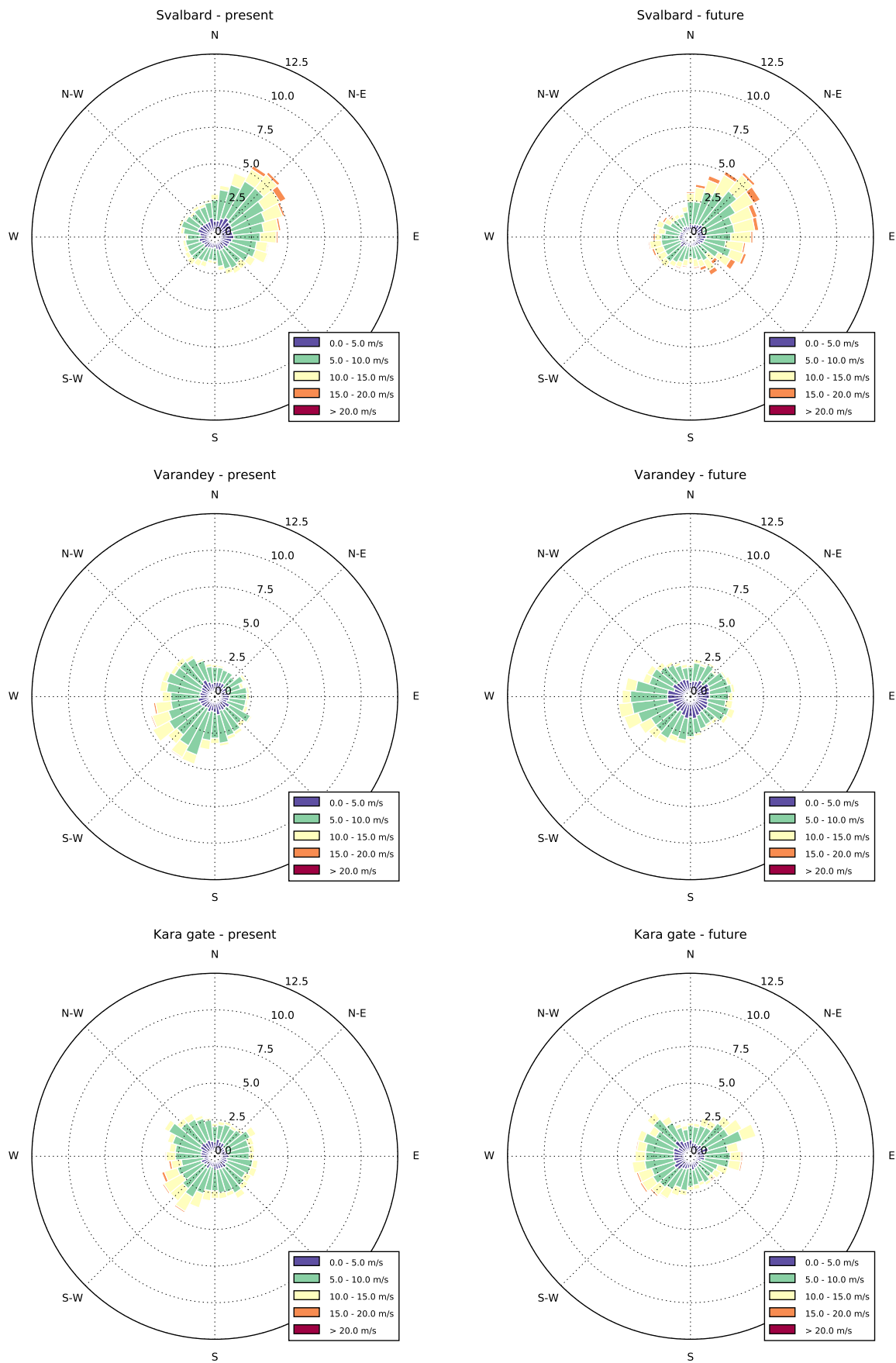


Figure S2: Wind roses showing comparison of wind conditions at the release point for each scenario, with present conditions on the left, and future conditions on the right. The length of each sector indicates the relative frequency of wind in that direction.

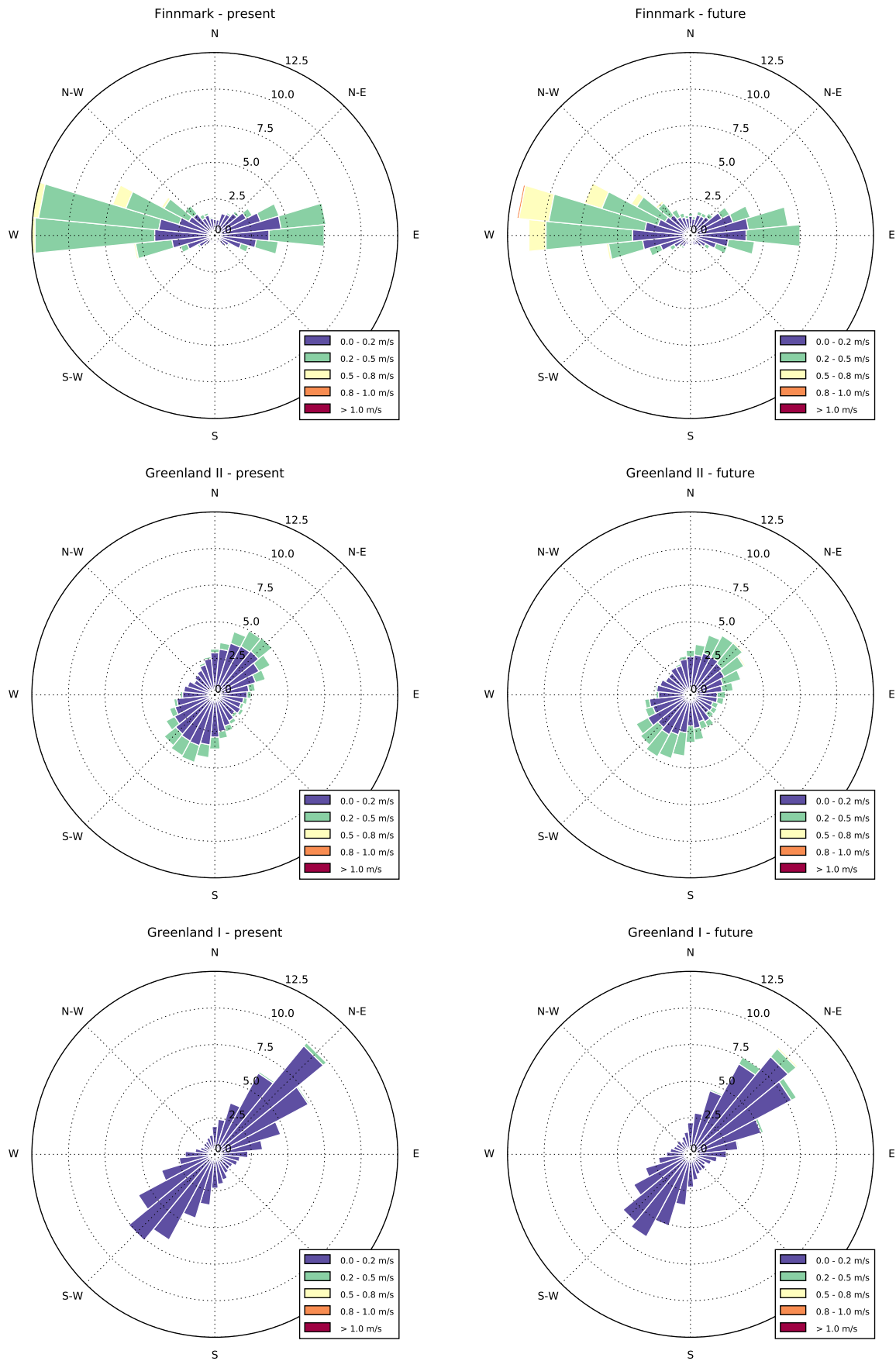


Figure S3: Current roses showing comparison of wind conditions at the release point for each scenario, with present conditions on the left, and future conditions on the right. The length of each sector indicates the relative frequency of current in that direction.



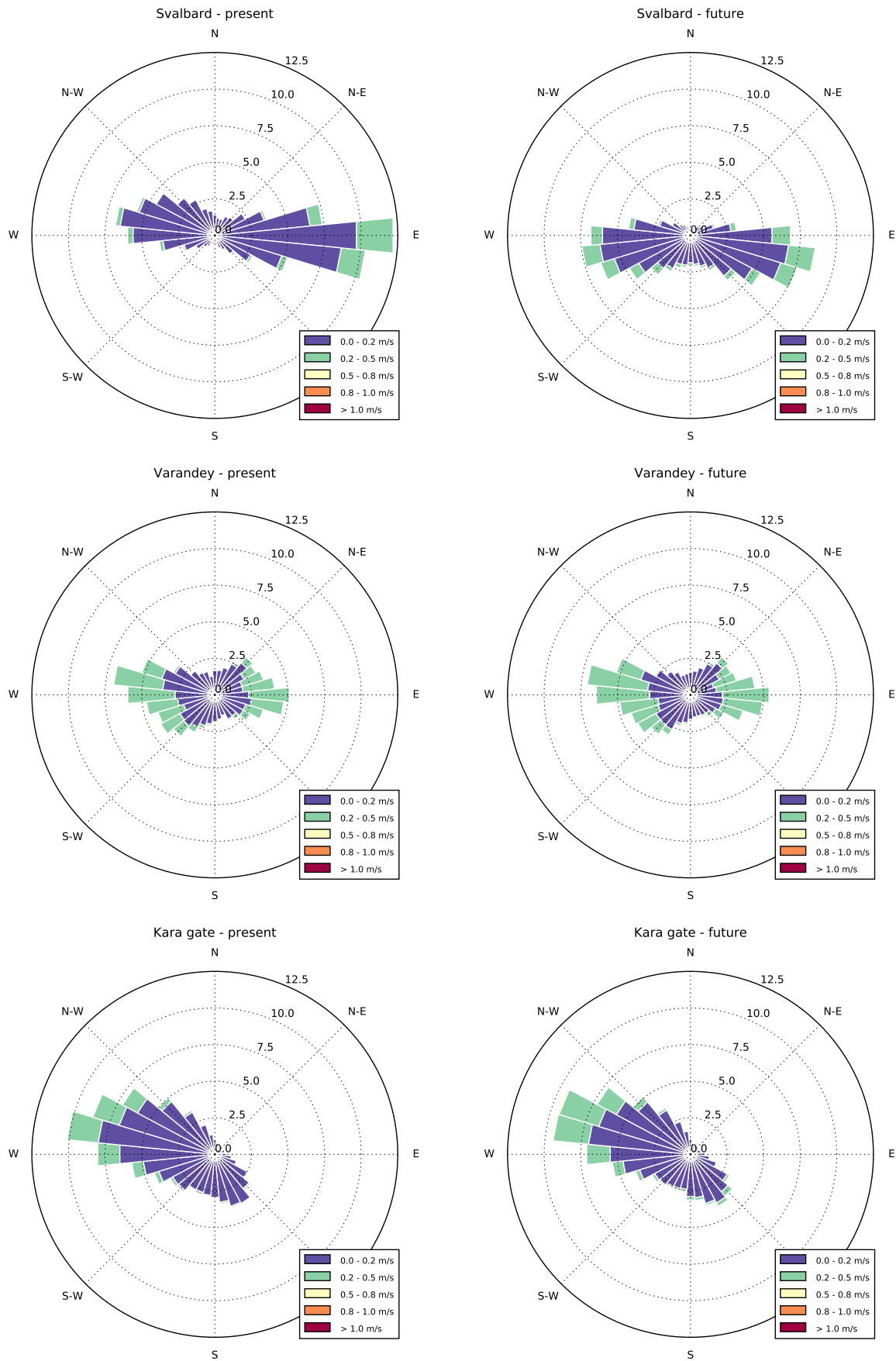


Figure S4: Current roses showing comparison of wind conditions at the release point for each scenario, with present conditions on the left, and future conditions on the right. The length of each sector indicates the relative frequency of current in that direction.

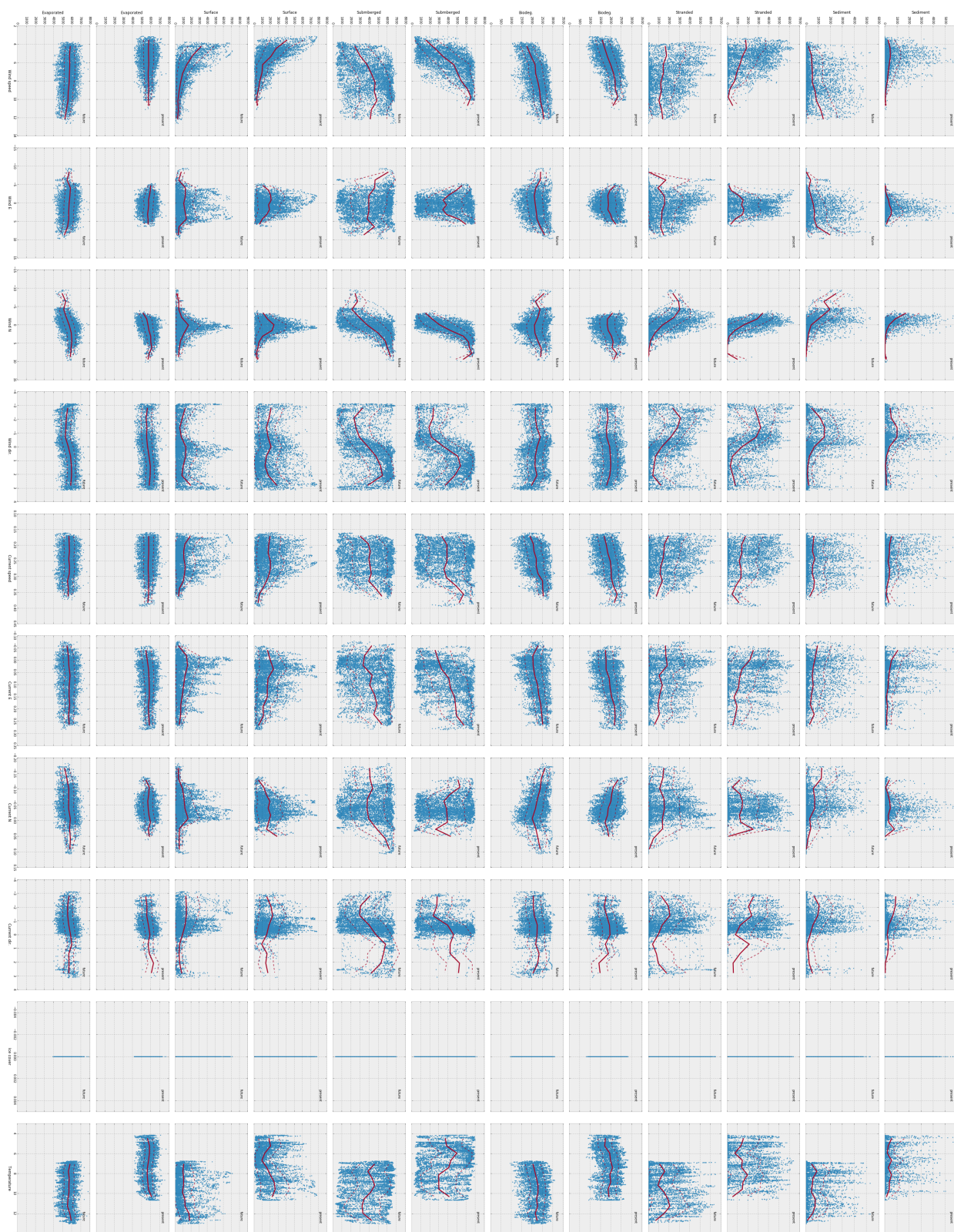


Figure S5: For the complete ensemble of simulations in the Finnmark scenario, the scatterplots show the amount (in metric tons) of oil in each compartment of the mass balance, at the end of the simulation, as a function of the average of each of the meteorological inputs during that simulation. The red line indicates the average, and the dashed red lines indicate one standard deviation in both directions.

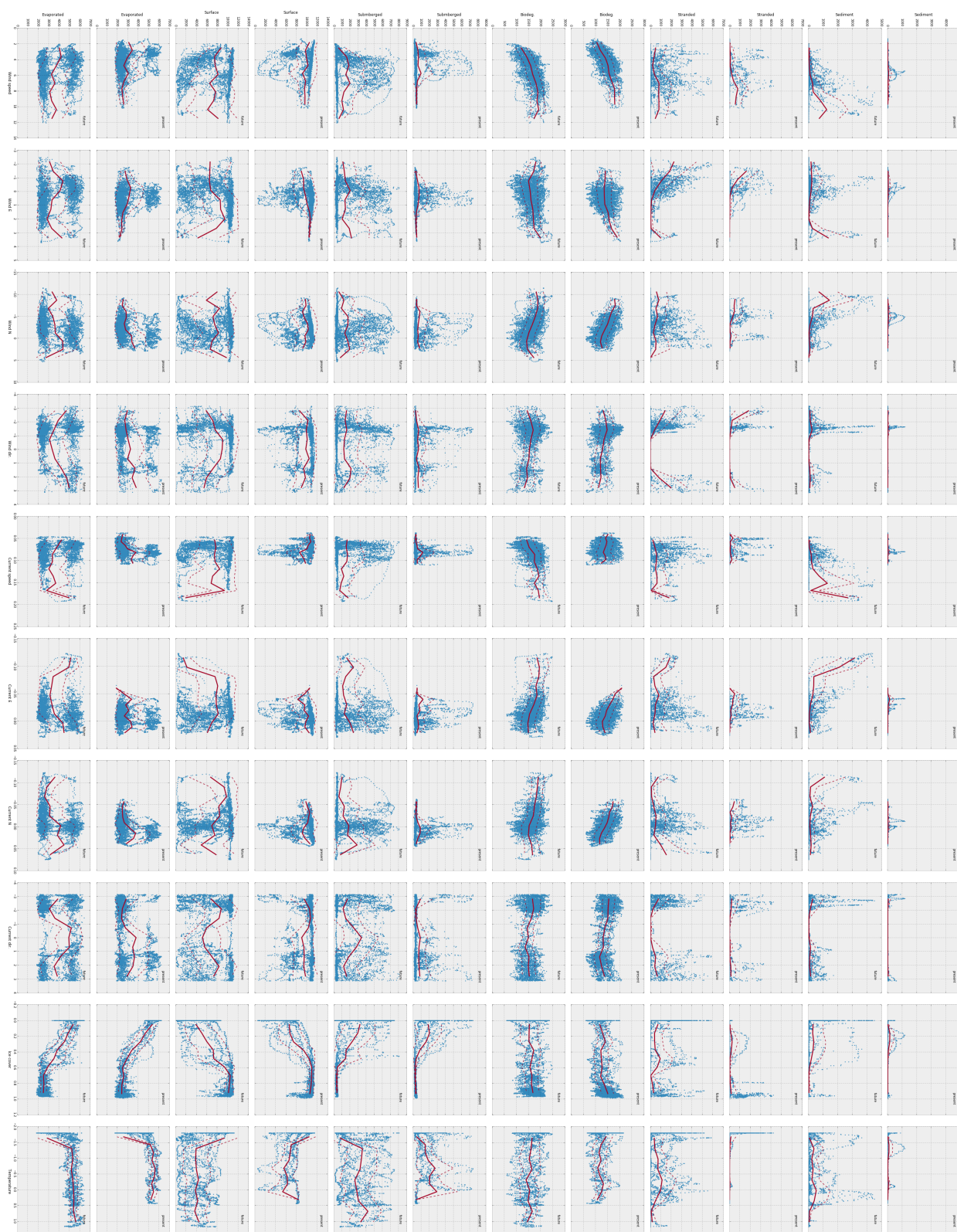


Figure S6: For the complete ensemble of simulations in the Greenland I scenario, the scatterplots show the amount (in metric tons) of oil in each compartment of the mass balance, at the end of the simulation, as a function of the average of each of the meteorological inputs during that simulation. The red line indicates the average, and the dashed red lines indicate one standard deviation in both directions.



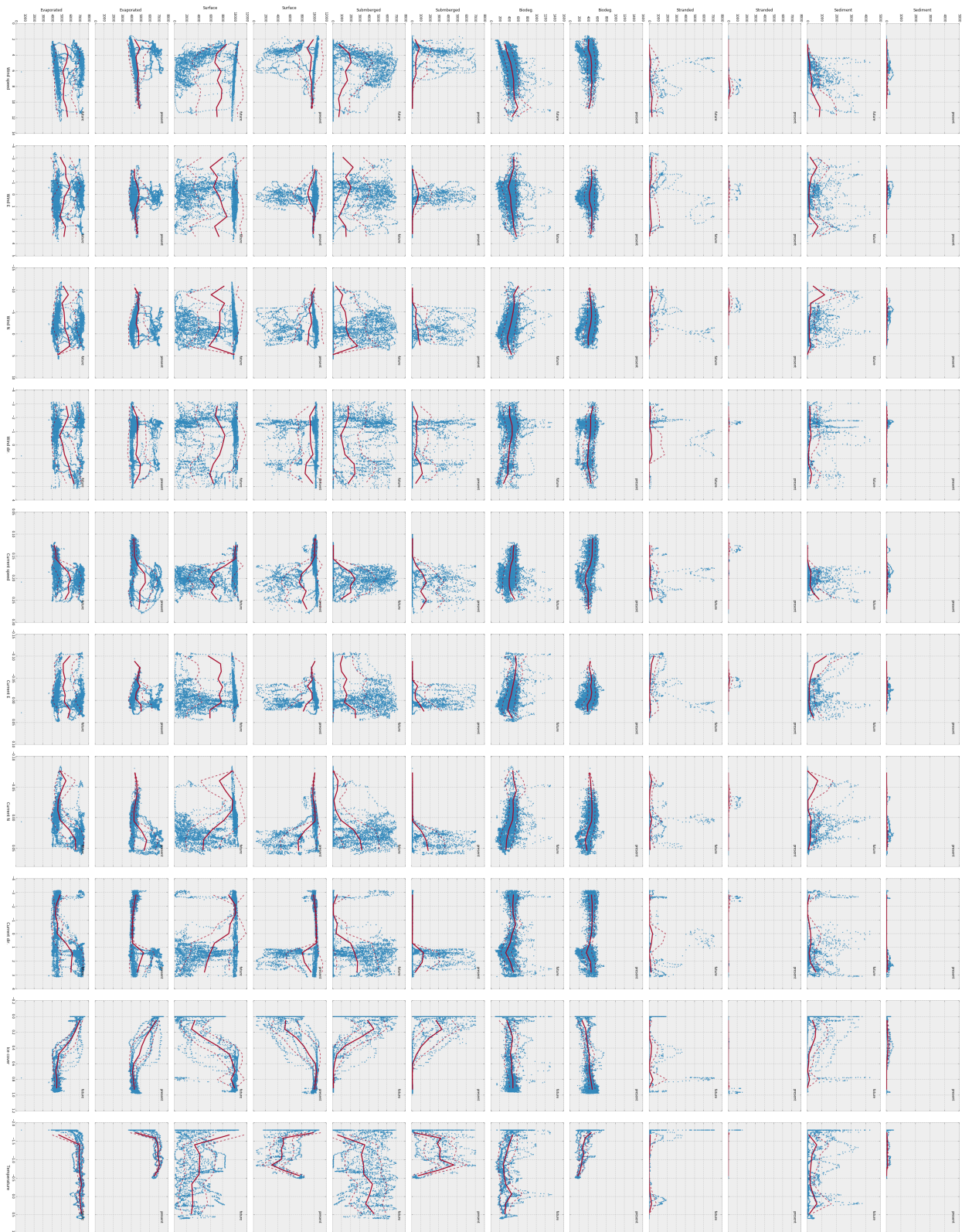


Figure S7: For the complete ensemble of simulations in the Greenland II scenario, the scatterplots show the amount (in metric tons) of oil in each compartment of the mass balance, at the end of the simulation, as a function of the average of each of the meteorological inputs during that simulation. The red line indicates the average, and the dashed red lines indicate one standard deviation in both directions.

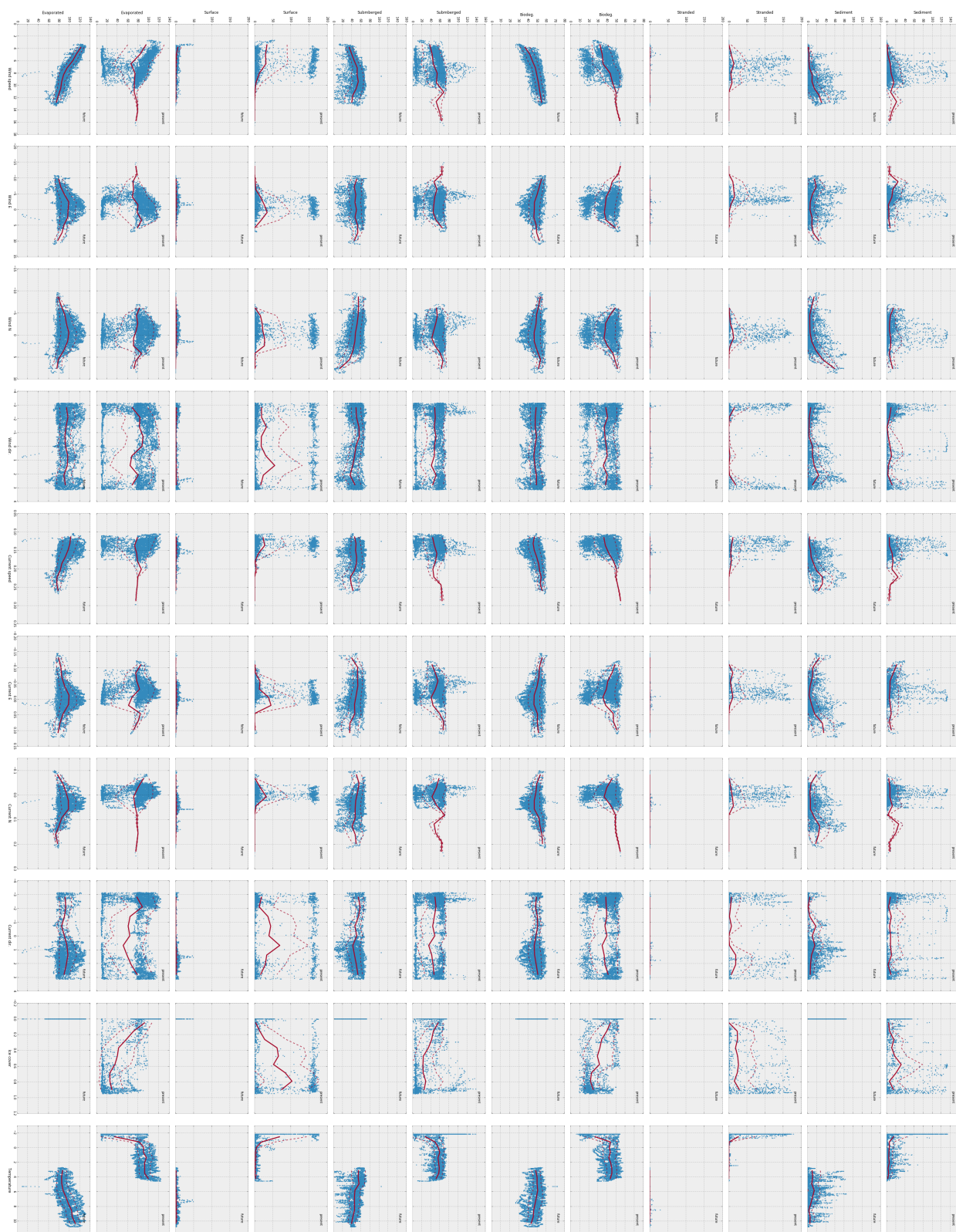


Figure S8: For the complete ensemble of simulations in the Svalbard scenario, the scatterplots show the amount (in metric tons) of oil in each compartment of the mass balance, at the end of the simulation, as a function of the average of each of the meteorological inputs during that simulation. The red line indicates the average, and the dashed red lines indicate one standard deviation in both directions.



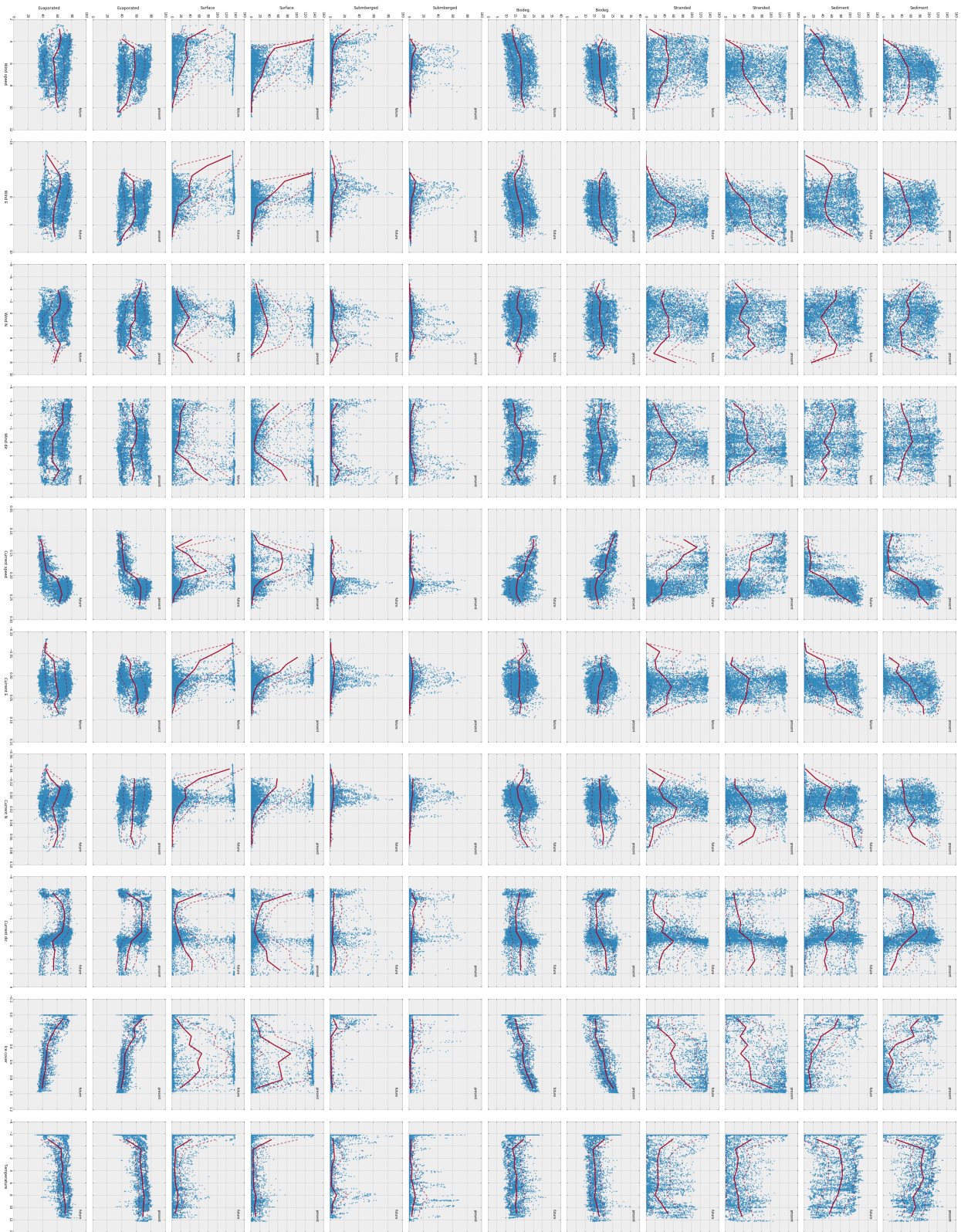


Figure S9: For the complete ensemble of simulations in the Varandey scenario, the scatterplots show the amount (in metric tons) of oil in each compartment of the mass balance, at the end of the simulation, as a function of the average of each of the meteorological inputs during that simulation. The red line indicates the average, and the dashed red lines indicate one standard deviation in both directions.

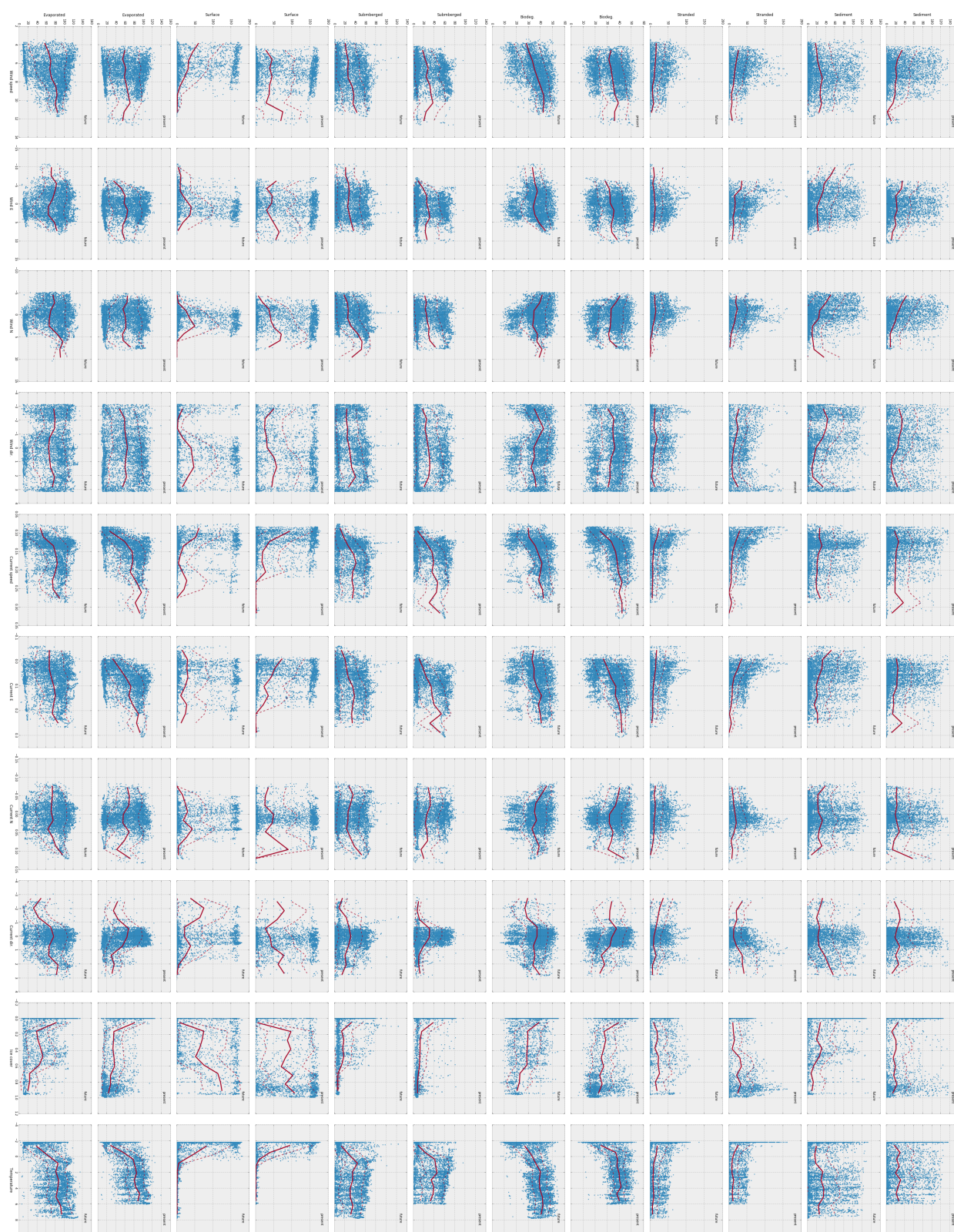


Figure S10: For the complete ensemble of simulations in the Kara scenario, the scatterplots show the amount (in metric tons) of oil in each compartment of the mass balance, at the end of the simulation, as a function of the average of each of the meteorological inputs during that simulation. The red line indicates the average, and the dashed red lines indicate one standard deviation in both directions.