$$
\begin{aligned}
\nabla_{\mathbf{w_{i,j}}} e &= \frac{\partial e}{s_{i,j}} \nabla_{\mathbf{w_{i,j}}} s_{i,j} \\
&= \frac{\partial e}{h_{i,j}} \frac{\partial h_{i,j}}{s_{i,j}} \nabla_{\mathbf{w_{i,j}}} s_{i,j} \\
&= \frac{\partial e}{h_{i,j}} \sigma(s_{i,j})(1 - \sigma(s_{i,j}))\mathbf{h}_{i-1}
\end{aligned}
$$