

$$\begin{aligned}
\text{Logit}(s_a(z, \theta)) = & \beta_{0,s,i} + \beta_{s,z} * z + \\
& \beta_{s,\theta_t,dry} * \theta_{t,dry,i} + \beta_{s,\theta_t,wet} * \theta_{t,wet,i} + \\
& \beta_{s,\theta_p,dry} * \theta_{p,dry,i} + \beta_{s,\theta_p,wet} * \theta_{p,wet,i} + \\
& \beta_{s,\theta_{s2},dry} * \theta_{s2,dry,i} + \beta_{s,\theta_{s2},wet} * \theta_{s2,wet,i} + \\
& \beta_{s,\theta_t \times z,dry} * \theta_{t,dry,i} * z + \beta_{s,\theta_t \times z,wet} * \theta_{t,wet,i} * z + \\
& \beta_{s,\theta_p \times z,dry} * \theta_{p,dry,i} * z + \beta_{s,\theta_p \times z,wet} * \theta_{p,wet,i} * z + \\
& \beta_{s,\theta_{s2} \times z,dry} * \theta_{s2,dry,i} * z + \beta_{s,\theta_{s2} \times z,wet} * \theta_{s2,wet,i} * z + \\
& \beta_{s,native} * g(i) + \beta_{s,native \times z} * g(i) * z,
\end{aligned} \tag{4.1.4}$$