Biodiversity: Species

x_{spp} is the status of the species biodiversity sub-goal

$$x_{spp} = max\left(\frac{\bar{R}_{spp} - 0.25}{0.75}, 0\right)$$

$$\bar{R}_{spp} = \left(\sum_{c=1}^{M}\left(\sum_{i=1}^{N_c} w_i\right) \times A_c\right)\left(\sum_{c=1}^{M} A_c \times N_c\right)^{-1}$$

$\bar{R}_{spp}$ region's area-weighted mean of species risk, with floor at 25% representing catastrophic loss of biodiversity

$\sum_{c=1}^{M} A_c \times N_c$ is the species count-weighted area across all cells in the region

N is the number of species (N_c is number species in cell c)

M is number of gridded cells the region's area contains

c a 0.5 degree grid cell within a region

w_i the risk status for each species i, assigned based on IUCN threat category

A_c area of cell c