Annex I: Species Flying Propensity (Sarremejane et al., 2017) traits description and formula

For each trait, the scores of categories promoting aerial dispersion were given higher weights, ranging from 1 to 4.

Maximum adult size: A weight of 2 was given to a small maximum adult size (*mss* ; < 1 cm) and a weight of 4 to larger species (*mbs* ; > 1 cm) since larger animals were assumed to be stronger flyers.

Number of generations: with a weight of 2 and 4 given to univoltine (*uv*) and semivoltine (*sv*) species respectively, since species with more generations within a year have more dispersal opportunities. Following the recommendation of Sarremejane, multivoltine (*mv*) was included as a trait category with a weight of 6 (Sarremejane, *personal communication*, July 11, 2019).

Aerial dispersal: expert-based estimation of the passive (*aep*) and active (*aea*) aerial dispersal ability of the species. A weight of 2 was given to aerial passive mode and a weight of 4 to aerial active mode, since authors assumed that active flyers can disperse longer distances.

Adult lifespan: increasing weights of 1, 2 and 4 given respectively to increasing lifespans, from very short (*vsl* ; < 7 days), to short (*sl* ; < 30 days), to long (*ll* ; > 30 days), available flying time increases with adult lifespan.

The final SFP index score of a given species is calculated by the sum of trait scores multiplied by corresponding trait weights, standardised by the sum of scores over all categories of a trait.

$SFP\_{i} =\frac{2\*aep\_{i}}{(aep\_{i}+aea\_{i})}+\frac{4\*aea\_{i}}{(aep\_{i}+aea\_{i})}+\frac{2\*mss\_{i}}{(mss\_{i}+msb\_{i})}+\frac{4\*msb\_{i}}{(mss\_{i}+msb\_{i})}+\frac{2\*sv\_{i}}{(sv\_{i}+uv\_{i}+mv\_{i})}+\frac{4\*uv\_{i}}{(sv\_{i}+uv\_{i}+mv\_{i})}+\frac{6\*mv\_{i}}{(sv\_{i}+uv\_{i}+mv\_{i})}+\frac{vsl\_{i}}{(vsl\_{i}+sl\_{i}+ll\_{i})}+\frac{2\*sl\_{i}}{(vsl\_{i}+sl\_{i}+ll\_{i})}+\frac{4\*ll\_{i}}{(vsl\_{i}+sl\_{i}+ll\_{i})}$

SFP formula for the species *i*