Available landscape targets

Name	Abbreviation	Level	Unit
Patch area	AREA	class	cell surfaces
Mean patch area	AREA_MN	class	cell surfaces
Total class area	CA	class	cell surfaces
Proportion of landscape	PLAND / NON_FOCAL_PLAND	class	percentage
Number of patches	NP	class	unitless
Patch density	PD	class	patches per cell surface
Smallest patch index	SPI	class	cell surfaces
Largest patch index	LPI	class	cell surfaces
Effective mesh size	MESH	class	cell surfaces
Splitting index	SPLI	class	unitless
Net product	NPRO	class	(cell surfaces)^2
Splitting density	SDEN	class	(cell surfaces)^-1
Degree of coherence	COHE	class	probability (in [0, 1])
Degree of landscape division	DIVI	class	probability (in [0, 1])
Force square patches	IS_SQUARE	class	true of false
Force different areas	ALL_DIFFERENT	class	true of false

- **`AREA` : Patch area**

Interval that defines the minimum and maximum allowed area for all patches of the landscape class.

- **`AREA_MN` : Mean patch area**

Interval that defines the minimum and maximum allowed mean patch area for the landscape class.

- **`CA` : Total class area**

Interval that defines the minimum and maximum allowed total area of the landscape class.

- **`PLAND` and `NON_FOCAL_PLAND`: Proportion of landscape**

Interval that defines the minimum and maximum allowed proportion of landscape occupied by the landscape class. `NON_FOCAL_PLAND` is used to enforce a PLAND target on the non-focal class, and is defined at the landscape level.

- **`NP` : Number of patches**

Interval that defines the minimum and maximum allowed number of patches in the landscape class.

- **`PD` : Patch density**

Interval that defines the minimum and maximum allowed patch density of the landscape class. Patch density is given by:

$$PD = \frac{NP}{L}$$

With NP the number of patches and L the landscape area.

- **`SPI` : Smallest patch index**

Interval that defines the minimum and maximum allowed size for the smallest patch of the landscape class.

- **LPI : Largest patch index**

Interval that defines the minimum and maximum allowed size for the largest patch of the landscape class.

- **MESH : Effective mesh size**

Interval that defines the minimum and maximum allowed effective mesh size. The effective mesh size is a fragmentation index based on the probability that two points that are randomly chosen are located in the main patch (Jaeger, 2000). It is given by:

$$MESH = \frac{1}{L} \sum_{i=1}^{NP} A_i^2$$

With L the total landscape area, NP the number of patches in the landscape class, and A_i the area of patch i.

- **SPLI : Splitting index**

Interval that defines the minimum and maximum allowed splitting index. The splitting index was defined by Jaeger (2000) and is given by:

$$SPLI = \frac{L^2}{\sum_{i=1}^{NP} A_i^2}$$

With L the total landscape area, NP the number of patches, and A_i the area of patch i.

- **NPRO : Net product**

Interval that defines the minimum and maximum allowed net product. The net product was defined by Jaeger (2000) and is given by:

$$NPRO = \sum_{i=1}^{NP} A_i^2$$

Where NP is the number of patches of the landscape class and A_i the area of patch i.

- **SDEN : Splitting density**

Interval that defines the minimum and maximum allowed splitting density. The splitting density was defined by Jaeger (2000) and is given by:

$$SDEN = \frac{L}{\sum_{i=1}^{NP} A_i^2}$$

With L the total landscape area, NP the number of patches, and A_i the area of patch i.

- **COHE : Degree of coherence**

Interval that defines the minimum and maximum allowed degree of coherence. The degree of coherence was defined by Jaeger (2000) and is given by:

$$COHE = \sum_{i=1}^{NP} (\frac{A_i}{L})^2$$

With L the total landscape area, NP the number of patches, and A_i the area of patch i.

- **DIVI : Degree of landscape division**

Interval that defines the minimum and maximum allowed degree of landscape division. The degree of landscape division was defined by Jaeger (2000) and is given by:

$$DIVI = 1 - \sum_{i=1}^{NP}(\frac{A_i}{L})^2$$

With L the total landscape area, NP the number of patches, and A_i the area of patch i.

- **`IS_SQUARE` : Force all patches to be square**

This target forces rflsgen to produce only patches that areperfect squares. Note that this restricts the range of possible areas, as patches areas must be in the form $A_i = w * w$, where w is the width of a perfect square.

- **`ALL_DIFFERENT` : Force patches to have different areas**

This target forces rflsgen to produce patches that all have a different area.

References   Jaeger, J. A. G. (2000). Landscape division, splitting index, and effective mesh size: New measures of landscape fragmentation. Landscape Ecology, 15(2), 115-130. https://doi.org/10.1023/A: 1008129329289