

Landscape fragmentation Effective Mesh Size: major and medium anthropogenic fragmenting elements (FGA2-M), version 2.0, Nov. 2016

The raster file is the basis of the indicator for assessing landscape fragmentation due to urban and transport expansion. The computation is based on the method of Effective Mesh Size (meff, Jaeger 2000). The effective mesh size (meff) can be interpreted as the area that is accessible to animals when starting a movement at a randomly chosen point inside a landscape without encountering a physical barrier. The meff expresses the probability that any two points chosen randomly in an area are connected, that is, not separated by the barriers of a Fragmentation Geometry (FG) such as transport routes or built-up areas. Hence, meff is a measure of landscape connectivity, i.e. the degree to which movements between different parts of the landscape are possible. The meff is measured as an area (km²), within the cells of a 1 km² regular grid as reporting units.

Simple

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No information provided.

Maintenance and update frequency	Irregular		
GEMET - INSPIRE themes, version 1.0	<ul style="list-style-type: none"> Habitats and biotopes Transport networks Soil 		
Keywords			
Keywords			
GEMET	<ul style="list-style-type: none"> landscape built environment animal habitat animal corridor built-up area 		
Continents, countries, sea regions of the world.	<ul style="list-style-type: none"> EEA39 European 		

Spatial scope	
EEA topics	<ul style="list-style-type: none">• Land use• Biodiversity• Agriculture and food• Forests and forestry
Use limitation	EEA standard re-use policy: unless otherwise indicated, re-use of content on the EEA website for commercial or non-commercial purposes is permitted free of charge, provided that the source is acknowledged (http://www.eea.europa.eu/legal/copyright). Copyright holder: European Environment Agency (EEA).
Access constraints	Other restrictions
Other constraints	no limitations to public access
Spatial representation type	Grid
Distance	1 km
Language of dataset	English
Character set	UTF8
Topic category	<ul style="list-style-type: none">• Environment



Begin date	2011-11-30
End date	2016-08-31
CRS identifier	EPSG:3035
Distribution format	<ul style="list-style-type: none"> • GeoTIFF (6.0)

OnLine resource

No information provided.

Hierarchy level	Dataset
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Conformance result

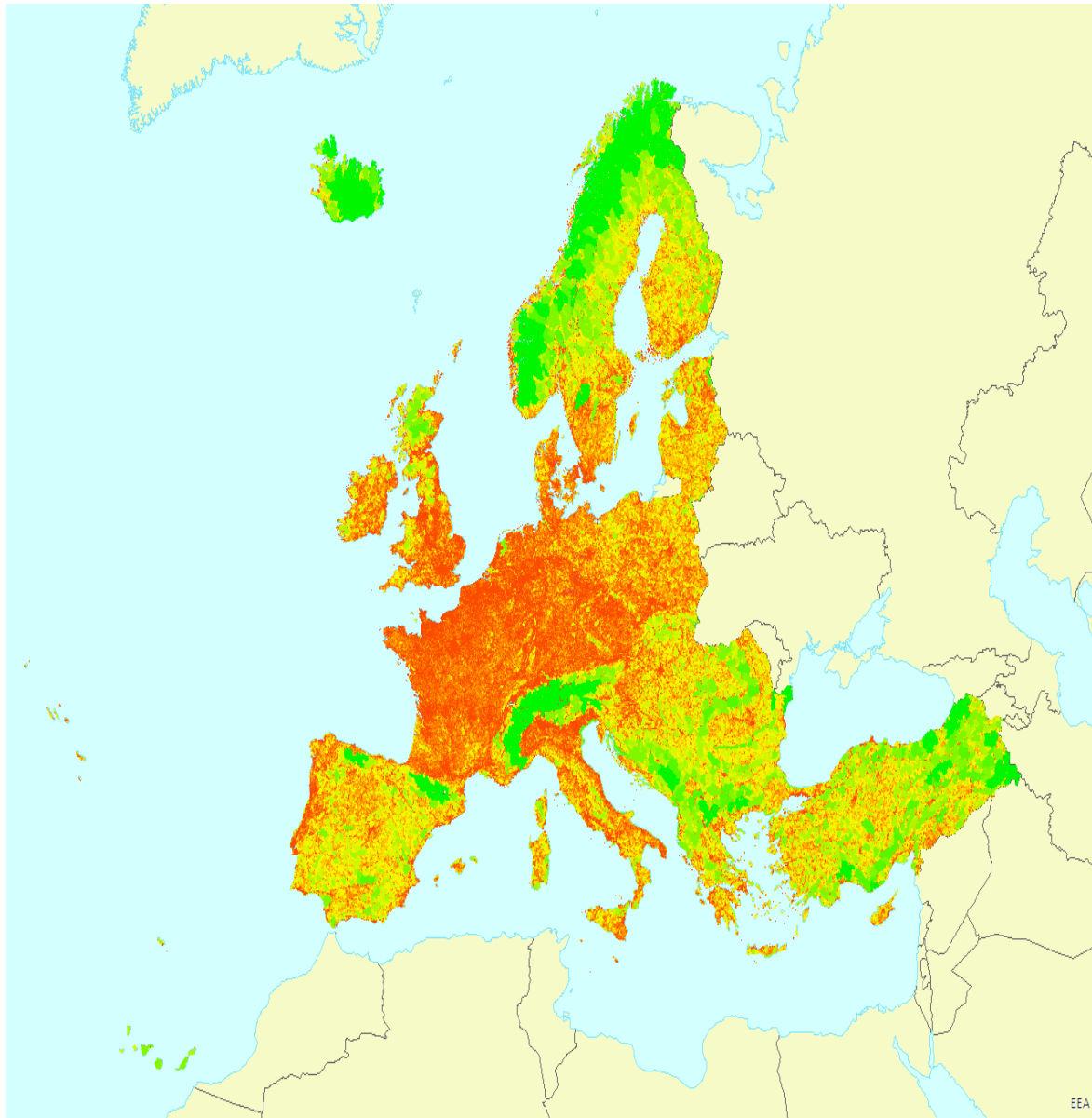
Date (Publication)	2010-12-08
Explanation	See the referenced specification

Statement	<p>Calculation of the effective mesh size $meff$ is based on two main datasets: 1) the Fragmentation Geometry (FG) (i.e., the set of all elements defining the fragmentation pattern) and 2) reporting units (spatial units for which $meff$ is calculated). The reporting units layer (in this case a regular 1km² grid) and the Fragmentation Geometry layer are overlaid and the $Meff$ is calculated for each reporting unit.</p> <p>The Copernicus High Resolution Layer - Imperviousness degree (30% of IMD) is the source layer for the build-up area. The Open Street Map (OSM) database is the source of the transport infrastructure. Only the following OSM elements are included in the calculation of the $meff$ index: motorways and motorways links, trunk and trunk links, primary roads and primary roads links, secondary roads and secondary roads links, tertiary roads and tertiary roads links, railroads. Tunnels are excluded from the dataset.</p> <p>The mapping computation steps are:</p> <ol style="list-style-type: none"> 1) selection of build-up areas from the Copernicus High Resolution Imperviousness Degree layer 2) selection of transport routes relevant to the fragmentation geometry 3) deleting of tunnels from the transport routes 4) creating of buffers around the transport routes. A buffer size is dependent on the route class 6) erasing of build-up areas and the buffered transport routes from the seamless EEA39 territory layer 7) computation of $meff$ values for each 1km sq reporting unit <p>References:</p> <p>Jaeger, J. A.G.(2000): Landscape division, splitting index, and effective mesh size: New measures of landscape fragmentation. Landscape ecology 15(2), pp 115-130, http://link.springer.com/article/10.1023/A%3A1008129329289</p>
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Metadata

File identifier	53bb9d36-0e28-4486-aa06-dc488671c84e XML										
Metadata language	English										
Character set	UTF8										
Hierarchy level	Dataset										
Date stamp	2021-05-19T07:56:50.635Z										
Metadata standard name	ISO 19115/19139										
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Metadata author	<table border="1"> <thead> <tr> <th>Organisation name</th> <th>Individual name</th> <th>Electronic mail address</th> <th>Role</th> </tr> </thead> <tbody> <tr> <td>European Environment Agency</td> <td></td> <td>sdi@eea.europa.eu</td> <td>Point of contact</td> </tr> </tbody> </table>	Organisation name	Individual name	Electronic mail address	Role	European Environment Agency		sdi@eea.europa.eu	Point of contact		
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Overviews



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