## Topographic exposure: a TOPEX map for the Republic of Ireland



Topographic Exposure or TOPEX is a concept from forestry designed to help in planning forest locations where wind may be a problem. TOPEX is usually a measurement made in the field as an index showing how exposed a site is. At the site the observer looks to the directions, north, south, east and west and measures the angle from the horizontal to the horizon.

A positive angle means the landscape in that direction is higher than the site and so offers some protection from wind, if the angle is negative, then the site is exposed in that direction

To calculate the total topographic shelter the four measures are summed and the lower the index is the more exposed the site is. Here we have recreated these measurements across the country using a Digital Elevation Model and a piece of code to automatically make the TOPEX calculation every 100m.

Blue areas are very sheltered whilst red areas are exposed (ridges in mountain landscapes show up very clearly in this map)

Datasets used: Teagasc TOPEX map

Map author: Stuart Green

Projection: ITM