Case Study

National Tree Map Data Included in First Online Natural Capital Calculator

Client:

Natural Capital Research (NCR) was established in 2018 by Professor Sir Dieter Helm and Professor Kathy Willis at Oxford University. Recognised thought leaders in the natural capital space, they have spent the last nine years leading the UK Government's ground breaking policy development via the UK's Natural Capital Committee. NCR helps its client measure natural capital, identify opportunities to enhance its value and report on progress to improve.

Industry:

Environment

Product:

National Tree Map™

Trees make an essential contribution to natural capital, not only for carbon storage and sequestration, but also by supporting biodiversity and a range of other services. The National Tree Map is the best available product for locating and measuring the potential of this asset type and its inclusion within NatCap Map provides increased confidence in the accuracy and currency of the modelling outputs.

Abigail Barker, Chief Operating Officer of Natural Capital Research

Summary:

NCR has developed the first online natural capital mapping tool in the UK – NatCap Map – which allows users, such as National Parks, utility companies, charities and private landowners, to download a report detailing what natural capital (assets) they currently have, together with an account of the different ecosystem services provided by those assets.

Over time, changes in the quantity and quality of natural capital assets and services can be monitored, providing management relevant evidence for shareholders, stakeholders, government and environmental groups

Challenge:

Natural Capital is the term used to describe those parts of the natural environment (species, habitats, communities, soils, water, air, etc.) that provide essential ecosystem services such as carbon dioxide sequestration and carbon storage, waterflow regulation, soil erosion protection and pollination.

As with financial capital, natural capital becomes an issue if too much is consumed or spent, effectively creating a debt which needs to be repaid. As the agricultural sector is going through the biggest changes in subsidies since the 1970s, landowners need new tools to identify and measure a baseline for natural capital. They also need evidence of environmental improvements and enhancements to continue to claim subsidies and grants.

Solution:

NatCap Map is the first online tool for mapping natural capital. It covers any user defined area in England, Scotland and Wales at a resolution of 25 centimetres. Baseline reports include options for opportunity mapping and valuations with details such as landcover; forest, trees and hedges, and topographical variations and service benefits include carbon storage, flood risk prevention and biodiversity.

Included within NatCap Map is data from Bluesky's National Tree Map. Derived from high resolution aerial photography and height data, this accurately records the location height and crown spread of more than 300 million trees across England and Wales that are 3 metres and taller in height.

Results:

NatCap Map is a powerful and practical tool that allows users to understand their assets and identify the best opportunities for environmental enhancement and improvement.

NatCap Map enables users to prepare for new subsidy opportunities, such as England's Sustainable Farming

Incentive and the Environmental Land Management Scheme, and report to government, investors and other stakeholders.

Users of NatCap and clients of NCR include Buccleuch Estates, Woodland Trust, Trinity College Cambridge and Southern Water.

National Tree Map Specification	
Layers	1. Canopy Polygons (Vector Polygon) - Representing individual trees or closely-grouped tree crowns
	2. Idealised Crowns (Vector Polygon) - Crown polygons visualised as circles for ease of use
	3. Height points (Vector Point) - Detailing the centre point and height of each canopy feature
Coverage	England, Wales & Scotland
Accuracy Z	± 1m rmse
Classification Criteria	Trees over 3m in height
Formats	Include: ESRI Shape & MapInfo, Geodatabase, DWG, KMZ
Standard Projection	British National Grid

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