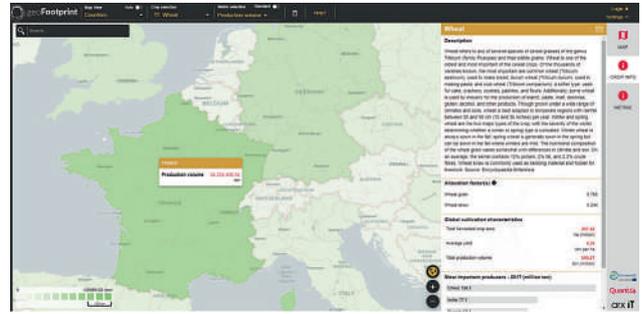


# NET ZERO NEWSROUND

A 20-strong scientific team working from the air and under the sea has utilised a Chiroptera 4X airborne bathymetric LiDAR system from Hexagon Group subsidiary **Leica Geosystems** to map the extent and composition of threatened seagrass meadows in the Caribbean. Together with other data and physical samples, the pilot project has the potential to gain understanding of one of the world's largest natural carbon systems. The ground-breaking work, spearheaded by Beneath the Waves – a global not-for-profit organisation dedicated to protecting the environment – received support from R-evolution, an investment programme from Hexagon that aims to reduce carbon emissions, save our oceans, protect our forests, and more.

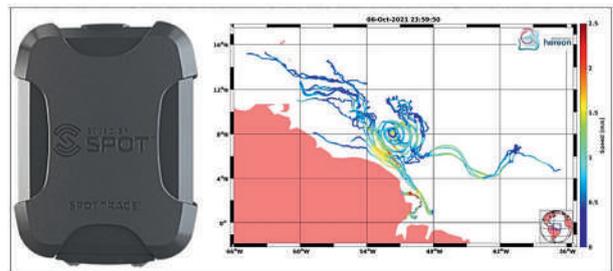


With agriculture responsible for more than 20 per cent of global greenhouse gas emissions, the complex, globalised nature of agricultural supply chains presents a massive data management challenge: Crops are traded globally, but their footprints are calculated locally. To reduce their footprint and meet ambitious targets like carbon neutrality, companies need to first understand the impact of how their crops are grown and managed. Help is now at hand thanks to geoFootprint, a new sustainable agriculture tool that combines data from satellite imagery with environmental metrics, allowing users to visualise the footprints of key commodity crops on an interactive world map at high resolution. The development from sustainability consulting group **Quantis** of Lausanne, Switzerland, has been supported by the EU-funded EIT Climate-KIC initiative.



The **Helmholtz-Zentrum Hereon** non-profit research institute based in Germany, has designed and engineered innovative ocean drifter devices built around Globalstar's SPOT Trace satellite GPS tracker. These are now being deployed as part of the EU-funded Atlanteco project and its experiment to collect, harmonise and map new and existing data about the microbiomes that inhabit rivers, coastal waters, the open ocean, marine sediments and the atmosphere.

*Pictured: Satellite-enabled SPOT Trace (left) tracks movement of currents and helps scientists monitor biodiversity*



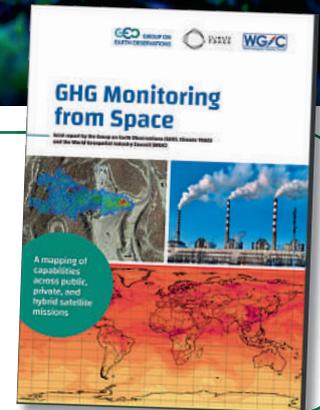
A Net Zero stage was one of the innovations at this year's Digital Construction Week event in London. In the presentation pictured here, Paul Surin, Global Built Environment and EC&O Segment Lead at IBM, highlighted the importance of a holistic strategy and technology approach in our journey towards a Digital and Sustainable Built Environment.



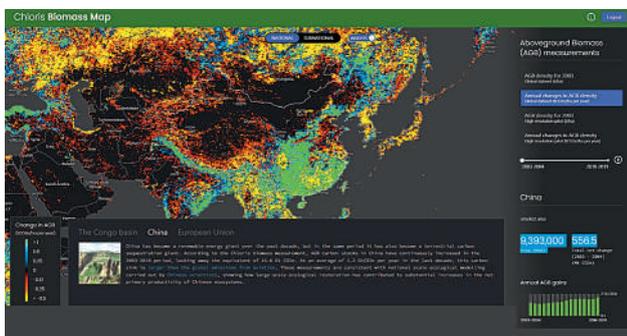
**Innovate UK KTN** has published an interactive report and 8-part podcast series on how satellite data can help solve problems on Earth. *Meeting Net Zero with the Power of Place* explores the vast potential of geospatial data, innovation inclusive growth, collaboration, system thinking and cultural change in dealing with global challenges in four areas: Energy, Nature, the Built Environment and Transport. The full report can be found at [https://rebrand.ly/ktn\\_nzlive](https://rebrand.ly/ktn_nzlive)



A joint report, “GHG Monitoring from Space: A mapping of capabilities across public, private and hybrid satellite missions” has been published on behalf of **the Group on Earth Observations (GEO)**, the **Climate TRACE consortium**, and the **World Geospatial Industry Council (WGIC)**. The 38-page document and the database that underpins it are meant to represent the first joint systematic effort by Earth Observation data providers from the public and private sectors to map the current and upcoming satellite missions that monitor greenhouse gases (GHGs). The report identifies seven key policy-relevant messages to help make decision makers aware of the existing and emerging capabilities to track GHGs in the lead-up to the first Global Stocktake of the Paris Agreement in 2023.



A new biomass mapping tool from **Chloris Geospatial** of Massachusetts, USA, provides a net view of the planet’s above-ground biomass (AGB) and how it has changed over the last 20 years. It can be used by companies looking to acquire carbon credits, by those pursuing projects to identify areas with the highest carbon stock, and by experts to monitor the risk to forests within supply chains. Perhaps most importantly, it gives governments a more detailed way to meet their Nationally Determined Contributions (NDCs) under the Paris Agreement. *Pictured: China is the largest above-ground biomass carbon sink globally, accounting for a third of all carbon sequestered in above-ground biomass between 2003-2019. Image: Chloris Geospatial*



**Absolar Solutions**, a Southampton University spin-out, will receive £7.5 million funding from the UK’s SPRINT business support programme for a major solar installation feasibility project. The company will collaborate with the University of Southampton, using satellite imagery and a Machine Learning computer model to develop a new solar feasibility model that will more accurately identify buildings suitable for solar panel installations. The model will be integrated into a web-based user interface that will provide solar feasibility information to the public.



Photo by Bill Moore for iStock



Urban Digital Twin pioneer **Cityzenith**, headquartered in Chicago, USA, has launched a nationwide TV campaign to help drive adoption and awareness of Digital Twins across industry, building and infrastructure owners, the public and investors. The campaign’s theme will be how Cityzenith’s Clean Cities – Clean Future initiative focuses on decarbonisation within urban areas, buildings, and infrastructure, which could deliver savings of US\$280bn over the coming years according to ABI research, as 70% of carbon emissions come from cities and 68% of the world’s population will be living in cities by 2050.

The **Open Geospatial Consortium (OGC)** has published a draft charter for its proposed Climate Resilience Domain Working Group (DWG). This Group will provide an open forum for the discussion and presentation of interoperability requirements, use cases, pilots, and implementations of OGC Standards in the context of cross-sector climate actions. Working in line with United Nations climate policy frames, targeted activities of the DWG will involve defining, collecting, analysing, and communicating data streams, and building value from raw data through to effective information visualisation and interpretation.

