

ARTEMIS METRICS

Measuring, Monitoring and Verifying Natural Capital Accurately and Ethically

Executive Summary

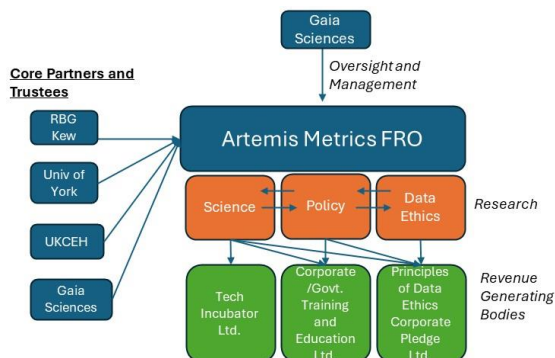
Accurately measuring, monitoring, and verifying biodiversity is an urgent challenge equally important and parallel to net zero targets. Led by Greensphere and our Gaia Sciences innovation platform (comprising of 12 leading UK applied biosciences institutes), Royal Botanic Gardens, Kew, UK Centre for Ecology and Hydrology (UKCEH) and the University of York are collaborating to create the world’s first biodiversity Focused Research Organisation (FRO). Representing the research of over 4000 world-leading scientists, the FRO intends to accelerate transdisciplinary research, innovation, training and policy in biodiversity measurement, monitoring, verification, data ethics and in corporate and public awareness and policy. Artemis Metrics will bring a unique tripartite structure under the FRO – of research and innovation, training/public awareness, and policy/corporate pledges - to unblock the constraints that currently exist between research, scale up and corporate/government adoption of technology and solutions in this space.

Problem Statement

Biodiversity is the bedrock of life-supporting natural systems, and a leading indicator of carbon sequestration. So far, 51% and rising of major UK and US companies have a biodiversity pledge but no metrics (only 5% have ‘targets’). The UK’s Environmental Improvement Plan, Biodiversity Net Gain laws and EU’s 2030 Biodiversity strategy aim to raise biodiversity by various targets, but none have any metrics systems to track progress. Large corporates and commercial forestry, land and agriculture asset owners are moving to Regenerative Agriculture, but none have trusted, scalable ways of proving biodiversity progress, and few evidence-led methods to do so. Globally, whole countries increasingly want to deploy technology and observation networks, but standards and technologies to enable do not exist at scale. With 72% of Eurozone companies and 75% of loans in Europe (and UK) exposed to the loss of biodiversity, the destruction of nature will lead to the destruction of the economy. Finally, the collection of data, ranging from carbon sequestration to eDNA monitoring poses several challenges to adherence to COP15 outcomes and international laws (like the Nagoya treaty). Never has there been a more urgent need to bring a multi-disciplinary approach to solving such a critical issue from both scientifically accurate as well as ethical and standards-based viewpoints.

Value Proposition

The FRO model allows Artemis to parallel-track three key interactive areas of research – the science of measuring, monitoring, and verifying biodiversity, policy governing biodiversity and potential policy improvements stemming from new science, and the data ethics around collecting information about biodiversity. These research areas in turn allow for the development of MMV tools, account for dynamic systems and recommend ‘most-right/least-wrong’ iterating courses of action on MMV, policy and data ethics in due course. The research will subsequently support and in turn be supported (financially) by three limited companies – the first incubating technology spinouts, the second providing corporate/NGO biodiversity policy training and the final one becoming a corporate pledge organisation deriving its revenue from fee memberships and audits.



Operating Model

Artemis Metrics will be a not-for-profit SME company, limited by guarantee, at the intersection of biodiversity policy, academia, and industry. The not-for-profit SME umbrella company will house the research programmes and 100% own the three revenue generating entities that the initial funding will kickstart – to be self-funding and subsidising the research in the parent company in due course. Based in York, the heart of the BioYorkshire initiative, the FRO’s purpose is to inspire collaboration between business, UK research institutes and government in solving the problem statement, underpinned by the best possible research.

About Us:

Greensphere: Investing and commercialising UK science from the world’s largest group of globally-renowned bioscience and environmental institutes to mitigate climate change and global biodiversity loss, including RBG Kew, UKCEH, University of York and 9 others via the [Gaia Sciences Innovation \(GSI\) Platform](#).

RBG Kew: Understanding and protecting plants and fungi for the well-being of people and the future of all life on Earth, including World-leading libraries - Herbarium, Fungarium, Millennium Seed Bank.

UKCEH: Delivering data, research and solutions to the biodiversity crisis that underpin global policies, commercial innovation and conservation action to conserve and restore biodiversity, natural resources and ecosystem functions for human well-being and livelihoods.

University of York: including the Leverhulme Centre for Anthropocene Biodiversity - interdisciplinary research into the complexities of biodiversity change and society’s response; and the Centre for Novel Agricultural Products - realising the potential of plants and microbes to provide sustainable supplies of food, fuel and chemicals.