

Natural capital and ecosystem services

The situation

Many businesses are aware that natural capital assets and the ecosystem services they provide underpin prosperous economies and societies. In practice, however, it is not always clear how and to what extent their commercial activity depends on the natural world. This means risks and opportunities can go unidentified, unvalued and unmanaged, leaving businesses exposed to regulation, legal action and brand damage.

To address this challenge, it's recommended that companies undertake a natural capital assessment to deliver strategic insights. Additional value can be unlocked by identifying operational improvements and successfully communicating an organization's positive impacts on ecosystems and society.

This is particularly relevant in light of emerging policy such as the UK's 25 Year Environment Plan, Green Finance Strategy and Environmental Land Management Scheme, which demonstrate the Government's intention to align environmental management, agricultural payments and reporting with natural capital-based approaches.

Natural
capital
stocks

Ecosystem
service
flows

Economic
and social
impact

What do we mean by natural capital?

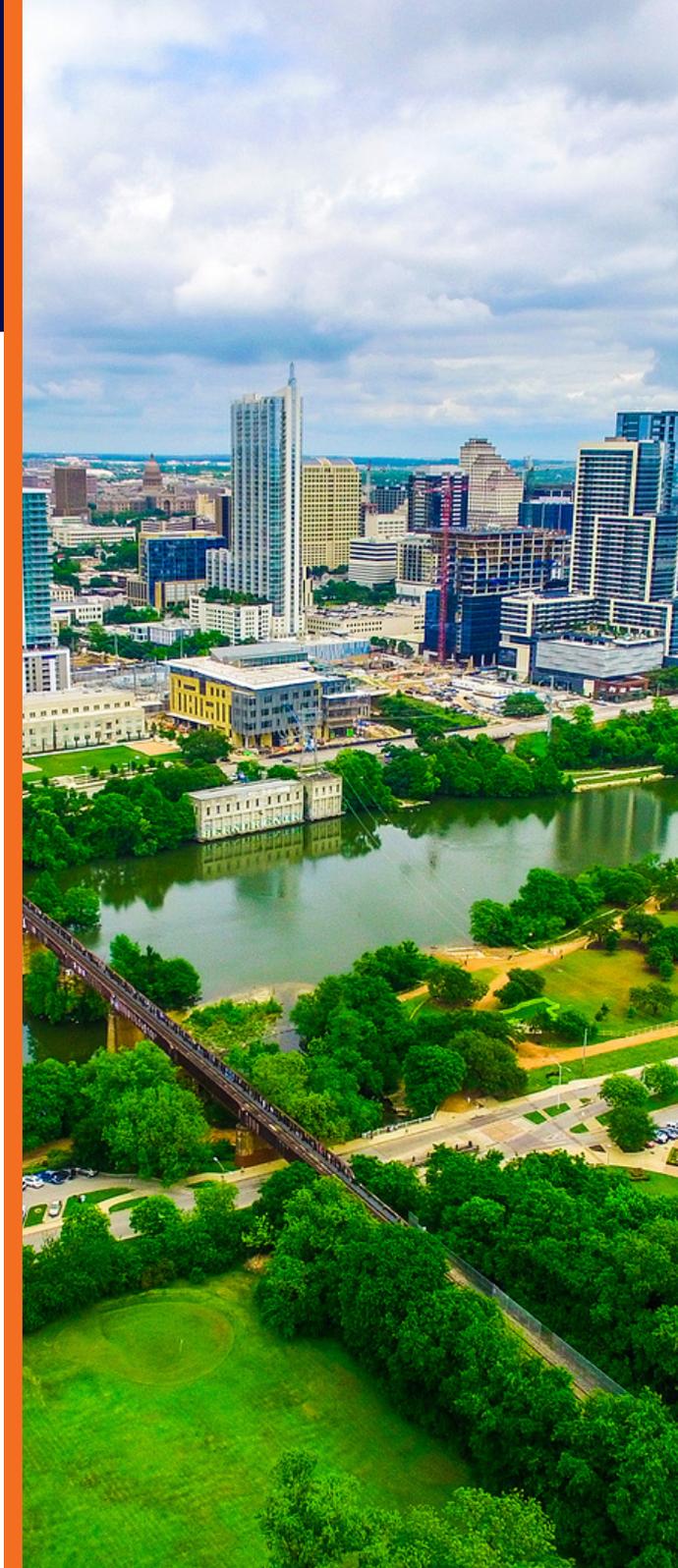
Just like the buildings and bridges of the human environment, the natural world has its own 'assets' such as trees, rivers and wildlife. Citizens and economies fundamentally rely on the many complex things that these natural assets do, whether it's the rivers that provide water, power and transport or the pollinating insects that ensure our crops grow. These 'ecosystem services' performed by the environment's 'natural assets' are extremely valuable.

A natural capital approach aims to measure that value in various forms. It looks at the ways in which we depend on the natural environment, as well as how humans impact it.

Our approach and services

Anthesis works with businesses across a range of sectors to better understand, evidence and assess their environmental impacts and dependencies. By coupling our environmental economics expertise with a knowledge of agriculture, supply chains and software, we support them to create natural capital strategies to protect and enhance ecosystem services.

We assess nature-related financial risks and opportunities, building on our experience of working with companies to assess the risks arising from climate change in line with the requirements of the Taskforce on Climate-related Financial Disclosures.



Our natural capital services touch many points across our business, but our primary areas of expertise fall in the following areas:

- 1. Impacts and dependencies analysis:** Research and map how your organization impacts on the natural world, as well as exploring where and how it is dependent on ecosystem services.
- 2. Supply chain analysis:** Explore and analyze how interactions with nature and society affect the financial performance of complex supply chains.
- 3. Software, metrics and data visualization:** Use software, data visualization and tools to translate data into insights for strategic decision making and capital allocation, drawing on our environmental accounting expertise.
- 4. Strategy and reporting:** Develop strategies that consider and account for nature related financial risks and opportunities.
- 5. Stakeholder engagement and implementation:** Facilitate stakeholder discussions to jointly develop and implement natural capital strategies.

At Anthesis, we recognize that natural, social and economic issues are fundamentally intertwined and businesses must view their impacts and dependencies broadly to remain resilient. To support this, our team works closely with our social impact team to provide a fuller perspective on external business risks and opportunities, including through an assessment of integrated social value.

About Anthesis

Anthesis is a global sustainability services and solutions provider, which believes that commercial success and sustainability go hand in hand. We develop financially driven sustainability strategies, underpinned by technical expertise and delivered by innovative teams across the world.

Case study: Revenue-at-risk of a global agricultural supply chain

Situation

The client wanted to assess the physical effects of climate change that would impact their agricultural commodities, such as water stress or extreme weather, and quantify them in monetary terms.

Solution

We developed a climate risk model that calculated a 'climate likelihood' index, as well as a crop-specific risk score for each stage of the supply chain.

These metrics were then combined to give an overall measure of climate risks at five year intervals between 2020 and 2050. In turn, a 'Revenue at Risk Indicator' figure was generated, representing commodity income that may be threatened due to supply chain climate disruption.

Outcome

This work is ongoing but, so far, the results have strengthened the case for more action and facilitated decision making around capital allocation. There are clear implications for range of business functions, including the supply chain, procurement, enterprise risk management and strategy.

Case study: Mapping and valuation of coastal ecosystem services in Blekinge County

Situation

The client wanted to map and value the coastal ecosystem services to assist in land-use and policy.

Solution

We used ecosystem valuation databases and developed proprietary databases with standard damage cost values for environmental indicators to estimate the monetary value of the services. These extended to water, air and noise pollution (including CO2), chemicals, health and accidents and landscape related quality. We presented the outcome using GIS mapping of both terrestrial and marine ecosystem services, and presented monetary values for some of the coastal ecosystem services.

Outcome

Our spatial map were used to build a case for their protection. The results were published by the county and have been used in local policy making, to aid planning of green infrastructure, and in the overall communication around the value of protecting ecosystem services in areas with high development pressure.

For further information, contact:

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