

Deloitte Climate & Sustainability Competency Lab

From science to business: providing companies
with the knowledge to turn sustainability into action.

LECTURE N°9 | Integrating ecosystem services in business decision making

Interview with **Ian J. Bateman & Anne-Claire Van Den Wall Bake**

Ian J. Bateman OBE, US-NAS, FBA, FEAERE, FRSA, FRSB, is Professor of Environmental Economics and Director of the LEEP at the University of Exeter, UK. He has written over 170 papers in the leading international peer-reviewed journals in natural and physical sciences, economics and social science. He has been PI/Col on over 75 grants worth in excess of £70million and has been advisor on environmental improvement to senior Government Cabinet ministers for over a decade.



Anne-Claire Van Den Wall Bake is Partner within the Regulatory Advisory & Reporting team at Deloitte Risk Advisory which focuses on sustainability reporting assurance and advisory including qualitative and quantitative risk management projects in the Netherlands. Her main focus area is Sustainable Finance, Sustainability reporting & Assurance and Regulatory Reporting. Anne-Claire leads the Center of Excellence for Regulatory reporting, which enhances value creation by providing an independent platform for banks with meaningful insights and in-depth knowledge.



Q.1

What is the “climate-nature nexus” and what are ecosystem services?

Anne-Claire Van Den Wall Bake: The "climate-nature nexus" (see image on the right) refers to the **critical connection between climate change and the health of natural ecosystems**. This relationship describes how climate change can positively and negatively impact the vitality of ecosystems, while also emphasizing the essential role that healthy ecosystems play in regulating the Earth's climate.

On the one hand, nature plays a role in **climate stability**. Ecosystems like forests, oceans, and peatlands function as carbon sinks, absorbing carbon dioxide from the atmosphere and helping to mitigate the effects of climate change. Moreover, ecosystems provide so called **ecosystem services, benefits that humans derive from nature**, which are **essential for survival and quality of life**. These, for example, include provisioning services such as the supply of food and water; regulating services that affect climate, floods, and diseases; supporting services like nutrient cycles and crop pollination; and cultural services such as recreational, spiritual, and other non-material benefits. On the other hand, as the **climate warms and weather patterns change, these ecosystem services may be altered or reduced**, thereby impacting not just the environment, and potentially leading to nature loss but also human societies that depend on them, resulting into **financial losses** as well. Conversely, when we protect and restore ecosystems, we not only preserve these services but also enhance their ability to act as natural buffers against climate change.

Q.2

Why should ecosystem services be integrated in business decision making?

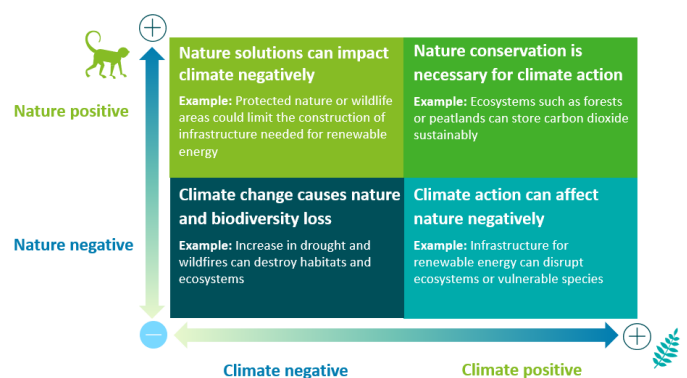
Ian J. Bateman: Accepting that the major focus of most businesses is basically to make profit, there's a couple of reasons why they should bring ecosystem services in. One is that **regulation is evolving** and responding to the ongoing changes that are recurring to the natural environment from the interaction with economies. Governments are starting to realize that these changes are of real concern to human long-term well-being: they **threaten the basis of economic activity** worldwide. Therefore, even for a company that has no interest in the natural environment, it would be imprudent and unwise to ignore the direction of travel of regulations. A second reason is that there are **massive business opportunities**: for example, in the UK, last year, the GDP of the country grew by 0.1%. However, at the same time, the green economy grew by 9%.

Finally, companies are led by **people** who have concerns that go beyond just their immediate financial short-term returns. There are just straight old-fashioned financial reasons for doing this, and there's wider environmental concerns.

C-TAKEAWAYS

Fast facts for the C-level

- Climate and nature are connected, as nature plays a role in climate stability and climate change affects ecosystems.
- Be mindful of all the regulatory changes underway.
- Rely on appropriate tools to make your decisions, so to consider both environmental as well as economic consequences.
- Look for those options which are good for the environment and good for the bottom line of your company.
- Expensive solutions are not necessarily the most efficient solutions: with the same budget you can go much further if you know the consequences of your actions.
- Assess the firm's impact on ecosystems and understand dependencies. Prioritize sustainability and nature and set clear, measurable targets for reducing nature-related impacts.
- Embrace transparency, foster collaborations with stakeholders and peers, advocating for policies that protect natural resources.
- Invest in nature to safeguard long-term viability and address the expectations of consumers, investors, and regulators.

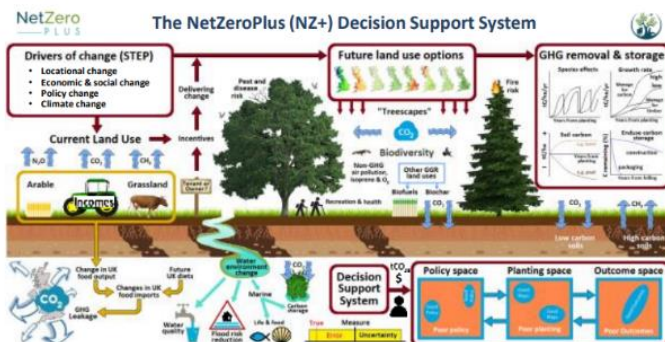


Source: WWF Living Planet Report 2020, Finance for Biodiversity. Both **climate and nature crises need to be addressed to avoid irreversible financial losses and damage to the environment and natural systems**. In fact, climate and nature actions influence each other: the degradation of forests, peatlands, mangroves, and other ecosystems has decreased wildlife populations and released huge amounts of carbon dioxide. Rising temperatures and extreme weather are, in turn, increasingly damaging biodiversity.

Q.3

What are Decision Support Systems (DSS) and how do they contribute to natural capital management?

Ian J. Bateman: DSS are one of the major drivers of what we do. The reality of decision making is that you're always under time pressure to make decisions. What's more, the latter are made by people with sets of knowledge which are often highly detailed but not necessarily that broad. **You won't have a decision-making team with the full range of skills available to understand all the consequences of investments and decisions** that you're making. So, our mission has been to combine all the knowledge that decision makers would need to draw on, if they wanted to know the full consequences of different investment options (see image below). You need people who understand the economy, but **you also need** a set of skills which are not commonly found in business, like **ecological expertise**. What businesses increasingly want to know and what governments really need to know is what are the **full effects of different decisions**. **Not knowing that information is the root cause of all the problems that we have**. Why have we got climate change on going? It's because nobody knew at the time what the real impacts and costs of emissions to the atmosphere were going to be. This information is still typically not considered by businesses; however, it is becoming their problem because regulation is changing. So, **DSS provide decision makers, who are not experts in all these consequences, with the information that they need to understand what the full repercussions of their decisions are**. So, it is like having on your team a climate scientist, a hydrologist and ecologist, plus all the economic specialists as well. You can examine the environmental as well as the economic consequences of your decisions. What is quite interesting is how much change you can deliver in your environmental impact through altering your financial choices. You can increase or decrease your environmental costs or the benefits of what you do, just by doing it in the right place and in the right way. **It is not a one-to-one relationship between, for example, economic cost and environmental benefit**: you can make much more intelligent decisions once you have broader data.



Source: "The NetZeroPlus Decision Support System". The image above displays the complexity of the world we live in. For instance, change in land use is driven by location change and economic & social change, among others, bringing different outcomes in terms of income, food, and greenhouse gases. If decision makers decided to close UK farming, plant trees, and build solar panels to reduce UK carbon emissions, they would succeed. However, in the long run, negative effects would emerge: the UK would end up importing food from areas which have an even higher carbon footprint per kg of food produced. For an individual, and even for a group of people, it would be difficult to choose which policy to implement and how, without relying on linkable models.

Q.4

What is TNFD and what does it try to accomplish?

Anne-Claire Van Den Wall Bake: The TNFD, or Taskforce on Nature-related Financial Disclosures, is a market-led initiative aimed at **redirecting the flow of capital towards nature-positive outcomes**. It focuses on supporting decision-making processes in business and capital markets with better quality information through **corporate reporting on nature** that improves enterprise and portfolio risk management. Its role can be understood in three ways: firstly, enhanced transparency by **providing a standardised framework** for organisations to incorporate their nature-related dependencies, impacts, risks, and opportunities (DIRO) in strategic planning and asset allocation decisions. Next, **provide information to investors** and other capital providers that **can support the shift of global capital to more positive outcomes for nature and society**. Finally, providing a consistent risk management process to assess and report on nature-related risk, **supporting organisations in understanding, managing, and mitigating their impact and dependency on nature**, while **decreasing nature-related risk exposure and enhance opportunities**. The TNFD disclosure framework provides recommendations around four core components, that are similar to and building on the Task Force on Climate-Related Financial Disclosures (TCFD), namely: **Governance**, including the role of the board and management in overseeing and managing risks and opportunities; **Strategy**, encouraging organisations to disclose the actual and potential impacts risks and opportunities on their business strategy and financial planning; **Risk management**, providing guidance on integrating risks into an organisation's overall risk management process; and **metrics and targets**, giving recommendations for suitable metrics and targets to use in assessing and managing risks and opportunities. In addition, the TNFD provides guidance designed to help businesses with practical steps to understand, measure, and report on their nature-related financial risks and opportunities. The **LEAP approach** is the most important one, **providing a step-by-step guidance for a nature-risk assessment**, to Locate, Evaluate, Assess, and Prepare nature-related DIROs. Other guidance focusses on sectors and biomes, metrics and targets, scenario analysis helping businesses to assess their resilience to various future environmental condition, and on Stakeholder engagement such as incorporating Indigenous and Local Knowledge."

"DSS provide decision makers with the information that they need to understand what the full repercussions of their decisions are. [...] What is quite interesting is how much change you can deliver in your environmental impact through altering your financial choices." *Ian J. Bateman*

Q.5

What benefits can companies get out of integrating ecosystem services?

Ian J. Bateman: Well, a lot of companies at the moment are very interested in offsetting what they do. For instance, you can offset your carbon in a very expensive or in a much more efficient way, and if you don't know that information, then you are not aware of whether you're being efficient or not. **You can make the same budget go much further if you know that the consequences of your actions are different.**

Efficiency isn't just the same as cost. Efficiency is about, for example, the number of species that you save per unit of money. The reality of business and government is that budgets are not huge for environmental improvement. We've got to work with the way the world is rather than only consider a world that doesn't exist. **So given the budgets that are available, we need to use them as efficiently as possible, and these are the tools that allow you to do that.**

If you want to offset carbon, a very popular way of doing so is planting trees. What people often forget is that there was something going on in that land beforehand. Let's suppose it was agriculture. So, you stop doing agriculture there and you plant trees. But where's the food, which was produced there, coming from now? It's coming from somewhere else and if it moves to a very low-cost place where people, for example, slash and burn forests to produce agriculture, then what you might find is that for every tree that you plant, two trees get failed elsewhere. **Instead of offsetting carbon, you are contributing to global warming.**

Q.6

What advice would you give to the C-level?

Ian J. Bateman: **Look for those options which are good for the environment and good for the bottom line of your company** because they do exist. If you are running a company, that means you've got big buildings and land; then use it. Make yourselves **energy independent** because that will **pay back**. There are many businesses now that have understood this lesson and when they build their new buildings, they don't really have rooms. They have energy generation units and, where they can get permission, they have windmills. The energy produced by a windmill runs along a quadratic function, by which if you've got a 1-meter blade, it produces 1 unit of electricity. If you got 2, it produces 4 units of electricity.

Anne-Claire Van Den Wall Bake: It's essential to integrate nature into corporate strategy. Start by **assessing your company's impact on ecosystems and understanding dependencies**. Prioritize sustainability and nature and set clear, measurable targets for reducing nature-related impacts and dependencies. **Invest in nature-positive projects and innovations**. Embrace **transparency** by reporting on nature-related risks and opportunities, aligning with frameworks like the TNFD. Foster collaborations with stakeholders and peers and lead by example, advocating for policies that protect natural resources. Remember, investing in nature is not just ethical; it's sound business, safeguarding long-term viability and **addressing the expectations of consumers, investors, and regulators**.

“Investing in nature is not just ethical; it's sound business, safeguarding long-term viability and addressing the expectations of consumers, investors, and regulators.”

Anne-Claire Van Den Wall Bake

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