PRIVATE SECTOR AND NATURAL CAPITAL
Recognizing value – Exploring opportunities

THE BUSINESS CASE
FOR NATURAL CAPITAL ASSESSMENT

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At a glance: the business case for natural capital

Identifying risks and using natural opportunities

Every business wants to create more value, be efficient and arrive at better decisions. To achieve that, one crucial element is bringing in more transparency about their own value chains, including the knowledge about the changing expectations of stakeholders (e.g. consumers).

Many businesses fail to recognize and assess the true value of natural goods and services – what we term as “Natural Capital” - which are indeed key components in economic activities. In worse case scenarios they contribute to the destruction of natural environment due to unsustainable management.

Natural Capital Assessments (NCA) provide businesses a tool to understand their impacts and dependencies on natural capital; identify risks and opportunities that they could incorporate in their business models and which enables them to sustain themselves in the long run, but also in the midst of the environmental, climate and social challenges.

Global trends towards integrating natural capital in corporate decision making

An increasing number of companies are beginning to assess the economic benefits provided by natural resources and risks associated with their unsustainable use. The fact that methods for accounting natural capital are being increasingly standardized also points to this trend. Important developments in this respect are the Natural Capital Protocol and those standards that are being developed by the International Organization for Standardization (ISO). The ISO Norm 14008 deals with the monetary evaluation of environmental aspects and impacts; and the ISO 14007 standard is for the determination of environmental costs and benefits.

The business case for natural capital assessment

The economic valuation of natural resource (use) and its integration in business decision makes sense for many reasons:

a) Natural capital belongs to the core of every business

All businesses directly or indirectly depend on the goods and services of nature i.e. natural capital. Companies can determine overall risks and opportunities, including those along the supply chain, by identifying the key environmental impacts and dependencies.

b) Policy frameworks for sustainable growth

Programs and legislations at the European level are increasingly strengthened to promote sustainable growth. These include the roadmap to a Resource Efficient Europe, criteria for Green Public Procurement and the EU Directive on disclosure of non-financial and diversity information. NCA helps companies react quickly and effectively to new political and legal requirements.

c) Finance sector as a driver for sustainable economy

When companies perform NCAs, they improve transparency about the environmental risks and opportunities along the whole value chain. By addressing the risks and developing sustainable management practices, they can potentially reduce their capital costs. Moreover, by identifying opportunities from natural capital and making better use of them, companies can secure business areas in the long run. This in turn means that companies can draw attention to new investors, that increasingly incorporate Environmental Social and Governance criteria (ESG-criteria), in their investment strategies.

d) Corporate responsibility and reputation

Documentation and transparent communication of a company’s environmental impact supports and strengthens relationship and trust building with the various stakeholders, such as shareholders, customers, suppliers, employees. Apart from the disclosure and consequent alleviation of environmental impacts, businesses can also clearly demonstrate through NCAs how they contribute positively to the local community and the society at large. Communication as well as the cooperation with different stakeholders increases the credibility of the company and employee loyalty.
INFOBOX 1: NATURAL CAPITAL

As an analogy to economic capital, Natural Capital can be defined as the world’s stocks of natural assets both renewable and non-renewable which include soil, air, water, minerals and all living things, beneficial and crucial to the survival of mankind.

1. Natural Capital Assessment – What is it about?

Dependencies and Impacts

In times of globalization, humans increasingly forget their dependence on nature. While it is obvious for the primary sectors, that depend on provisioning services, such as food, water and fiber, the natural capital dependencies for the secondary and tertiary sector may be indirect but nonetheless important. Take for example, extraction of resources or use of agricultural land. Such activities are placed at the very beginning of the value chain. Along with other processing steps those steps are overlooked by businesses and consumers alike. In this way, numerous dependencies on natural capital, which lie outside the direct sphere of influence of companies, are not taken into account in decision-making processes such as the selection of product components or suppliers (Infobox 1).

Nature is more than just a source for raw materials, providing manifold services that we take for granted. These include various services (what are also called ecosystem services) that help in the regulation of the physical environment (e.g. climate, flood protection), regulation of the biological environment (e.g. pollination, nutrient cycling, soil formation), but also services which are difficult to measure such as recreation and well-being (e.g. through the aesthetic value of nature). Furthermore, nature serves as a source of innovation, for example the velcro closure is inspired by a plant species, the large burdock.

But while businesses depend on these natural goods and services on one hand, they also disrupt these - often without paying the cost of environmental damage. Businesses also may have a positive impact on natural capital without adequately capturing the value of such impacts. Negative and positive impacts on natural capital do not only affect the business performance directly, but can also have an effect on the local population or the society as a whole (Fig. 1).
Cluctuations or changes in the availability of resources and functioning of key ecosystem services can have a direct impact on the business performance. Indirect risks for companies also include changes in the expectations of different stakeholders due to the deterioration of natural capital. A strategic integration of the interactions between companies, nature and society offers companies a chance to secure business areas in the long term.

**Valuation and Monetization**

The extent of natural capital dependencies and impacts using natural capital assessment can be expressed qualitatively, quantitatively or in monetary terms. The results of such an assessment can help companies make informed decisions and address risks and threats at an early stage (Infobox 2).

Monetary values are tangible and comprehensible. They enable complex interactions to be processed for decision-making. In this way, different environmental impacts can be compared alongside classical financial indicators.

The NCA is not about putting a price on nature, it is not intended to sell or trade nature. Rather, such economic valuation furthers the goal of systemically incorporating the value of nature into the decisions and actions of a company.

According to the business needs, NCAs could also lead to the need for qualitative valuation (e.g. the ranking of natural capital impacts or dependencies) or quantitative valuation (e.g. greenhouse gases emitted in CO₂-eq to assess the magnitude of natural capital impacts).

Hugo Boss, the German fashion label, used NCAs to pin down the most relevant environmental factors that play an important role in the production of their brand (e.g. t-shirts, shirts). Through a life cycle assessment, relevant environmental impacts along the value chain were identified. These include energy use during bleaching and dyeing, water scarcity and eutrophication caused through cotton cultivation.

Assigning monetary value to the impacts allowed Hugo Boss to compare alternative irrigation systems as well as regenerative and conventional energy resources. Such an analysis helped Hugo Boss to develop and prioritize concrete action programs which will be reflected in the company’s “Sustainable Cotton Strategy.” (Hugo Boss White Paper 2016)
NATURAL CAPITAL ASSESSMENT

At the international and national level, natural capital accounting is becoming increasingly important for companies to incorporate.

Uptake in 2010 (maturity)

Uptake in 2015 (maturity)

Fig. 2: Natural capital in focus: increase in the number of companies assessing their impacts and dependencies (Adapted from TruePrice 2015).
2. Business Case

Natural capital belongs to the core of every business

Each and every business depends on natural capital goods and services. A natural capital assessment helps a company identify significant natural capital impacts and dependencies arising from their various operations (Infobox 3).

Secondary and tertiary companies particularly face the most challenges as the environmental impacts lie within the stages of raw material extraction and processing and mostly outside their direct reach. Challenges include limited resource availability when raw material suppliers are unable to deliver the required quality or quantity at the desired time, due to unsustainable practices or ecological and climatic circumstances.

In cooperation with various departments, such as purchasing or production, along with internal and external experts from universities, non-governmental organizations and suppliers, effective measures can be developed to help reduce corporate environmental impacts, dependencies and risks. This can help strengthen business areas and reduce significant risks that lie beyond the scope of the company.

Otto Group – Using the value chain as a starting point

The Otto Group regularly evaluates the ecological impacts along its entire value chain. In 2014, the overall environmental impact of the company was estimated at more than 20 % of turnover, with 70 % of this impact being in the “Raw Materials & Processing” stage of the value chain. The impacts were assessed in their relevance to the business activities, and appropriate targets and measures were developed accordingly. For example, in the upstream stage, the emissions of pollutants and gases and water consumption were identified as being the major environmental fallouts. Based on this, the Otto Group set itself the goal of sourcing the total volume of cotton for licensed and proprietary brands from sustainable cultivation by 2020 and thus saving 2,100 liters of water and 40 % CO2 emitted per kilogram of cotton produced. (Sustainability Report 2015)

According to the needs of the company, the focus of an assessment can be on the corporate, product or project level. The inclusion of various internal and external stakeholders enriches the decision-making basis for companies, which is otherwise mainly guided by financial ratios and operating figures.

Through different applications, the assessment of natural capital provides the opportunity to incorporate key environment aspects into various operational and strategic decision making. This enables the company to secure the basis of its own business, identify inherent potentials of nature and natural resource use, and secure long-term business areas.
Policy frameworks for sustainable growth

Governments around the world have begun to set up a System of Environmental-Economic Accounting (SEEA) to account for the state of their ecosystems and natural resources. This allows countries to establish necessary interventions to protect the environment and to demand compensatory measures. In addition to this, international market-based instruments are increasingly being discussed and developed to generate private funding for nature conservation. In the interim, new regulations and fees are being conceptualized for the private sector, whose activities are largely responsible for the considerable damage of the environment, but without having to pay the necessary costs for the same (Infobox 4).

Companies carrying out natural capital assessments create transparency regarding their own environmental impacts. This transparency further identifies critical aspects and opportunities which help companies react with foresight and preparedness to changes in the environment such as a reduction in resources or critical emission values in a region, and to new political or legal requirements in the future.

In addition to regulatory measures, governments in developed economies are using their purchasing power to promote environmentally-friendly products and resource-friendly production. For example, the European Commission is expanding its Green Public Procurement to cover even more products than for example textiles, furniture, renewable energies, transport and food.

The Directive on disclosure of non-financial and diversity information (2014/95/EU) has to be transposed into national legislation by the Member States of the EU. This legislation requires businesses to report on their social and environmental impacts in their management reports. The so-called CSR-Directive aims at giving shareholders and other interested parties the necessary information about the performance of the companies and strategies, risks and results related to company’s environmental impacts and dependencies. In Germany, the CSR-Directive establishes new reporting requirements,

INFOBOX 4: EUROPEAN COMMISSION’S ROADMAP TO A RESOURCE EFFICIENT EUROPE

“Market based instruments have a strong role to play in correcting market failures – for example by introducing environmental taxes, charges, tradable permit schemes, fiscal incentives for more environmentally-friendly consumption or other instruments. New policies should help to align the prices of resources that are not appropriately valued on the market, such as water, clean air, ecosystems, biodiversity, and marine resources. These may need to be part of a broader approach involving regulation for example where resources are common goods.” (COM 2011)
particularly for listed companies employing more than 500 people, and thereby increases transparency in the collection and communication of business related environmental impacts. Companies that record and evaluate their impacts on natural capital are also well prepared to comply with increasing reporting mandates.

The European Union furthermore promotes the topic with its EU Business@Biodiversity Platform. The platform provides a forum for dialogue and policy interface to discuss interdependencies between business activities and natural capital and biodiversity at the EU level. With a separate workstream on Natural Capital Accounting the platform aims to help companies identify best practice guidance and tools available to support informed business decisions related to the environment and the development of natural capital accounting systems.

### BUSINESS CASE

Two methods are used for laying pipelines: one of them is the widely employed traditional open excavation method which requires the digging up of a large excavation pit resulting in noise and releasing fine dust particles into the air, traffic diversions and other similar inconveniences. The other method which is called trenchless technology is characterized by the digging of a few small pits and a subsurface pipe laying, whereby local residents are less burdened by the noise and fine dust. This also results in shorter road closure time, lower amount of debris disposal and trees, ground water and vegetation are also relatively less affected.

TRACTO-TECHNIK, the German Society for Trenchless Technology (GSTT), the Wismar University of Applied Sciences and the Global Nature Fund have conducted a natural capital assessment, which assesses and evaluates both technologies and their relevant environmental impacts. For an installation of one kilometer drinking water pipe in a residential area in Berlin the open construction results in 38,565 Euro natural capital impacts more than the trenchless pipe laying. The advocates of trenchless technology use the analysis to demonstrate the measured advantages of trenchless technology against that of the traditional open excavation adopted by public contracting authorities. This also enables public sector to have a better understanding and factor in the ecological aspects of such public works and the associated costs such as health and vegetation loss. ([http://www.business-biodiversity.eu/en/projects/natural-capital](http://www.business-biodiversity.eu/en/projects/natural-capital))

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**Fig. 3: Trenchless pipe laying with horizontal directional drilling technology.**
INFOBOX 5:
SURVEY OF THE NATURAL CAPITAL DECLARATION ON NATURAL CAPITAL RISKS AND CAPITAL COSTS

Almost half of the financial institutions see natural capital as very or extremely relevant to their core business strategy and/or portfolio risk management.

Over 75% of the financial institutions surveyed said they monitor natural capital risks at a transaction level. (NCD 2015)

INFOBOX 6:
DIVESTMENT OF THE ALLIANZ GROUP

At the end of 2015, the Allianz Group announced that it would no longer invest in mining companies and electric utilities that derive more than 30% of their revenues from mining coal and 30% or more of electricity generated from thermal coal respectively. Allianz stated it was convinced that investments damaging the climate are no longer profitable. Instead, Allianz is now investing more in renewable energies. (Allianz 2015)

Finance sector as a driver for sustainable economy

Creditors, investors as well as rating and ranking agencies get a good insight into the professional risk management of a company and its long-term vision, when the company communicates its own environmental risks, and the corresponding measures, in a transparent manner. Therefore, investors are increasingly incorporating ESG-criteria in their investment decisions. A natural capital assessment provides a basis for a clear presentation of external environmental impacts and dependencies, as well as the strategies and measures that help address related risks. An analysis of more than 200 scientific studies has concluded that good environmental management reduces the risk to the investor which in turn means lower capital costs for the company (Clark, Feiner, Vieh 2015).

In the annual survey, Dow Jones Sustainability Index (DJSI) requests explicit information on the measurement and evaluation of environmental impacts by industrial businesses. The focus is mainly on externalities that are currently not reflected in financial accounting but which might have the potential of being priced in. Again here, companies who identify their environmental impact by means of natural capital assessment are able to provide the necessary information and can present themselves positively in the financial market. This is especially important because the finance sector increasingly integrate natural capital in their decisions (Infobox 5).

Investors who observe global trends and take into account the ecological risks of businesses in their investment decisions are increasingly diverting capital from investment funds and companies that are not ecologically friendly – so-called divestment. A current trend for example is the divestment of fossil fuels as these are regarded as overvalued and pose a risk in the long run for the investor. This affects not only oil and gas companies, but also companies in all industries, which are characterized by energy-intensive processes and products. For example, UK, Scandinavian and Dutch pension funds, ethically based large-scale investors such as foundations and churches, and other conventional investors such as insurance companies, banks and asset managers strategically withdraw their capital based on such information (Infobox 6).

Companies that record and evaluate their environmental impact can effectively use such trends, positioning themselves as frontrunners and increasing the attractiveness for investors. This is especially true for companies shifting towards the sustainable use of natural resources and thus securing their business in the long term.
Corporate responsibility and reputation

Environmental and sustainability management is based on the documentation and assessment of environmental impacts. Natural capital assessment provides transparency about the extent of environmental impacts. Subsequently, measures can be developed to reduce the degradation of natural capital and to create positive effects.

BUSINESS CASE

Long term relationship and trust building with the company’s stakeholders is strengthened by transparent and comprehensible internal communication with the employees as well as by external reporting to its shareholders, customers and suppliers.

Companies who conduct natural capital assessments benefit from linking financial data with corresponding ecological and social aspects in external reporting. The company can merge its own ambitions and aspirations with the responsibility to operate as far as possible in a manner consistent with the environment and with society.

A concept that summarizes all the types of capital contributing to the value creation of a company in internal and external communication is called “Integrated Reporting (IR)” from the International Integrated Reporting Council (IIRC). Natural capital is besides financial and human capital one of these types of capital. Companies can use this concept to show with credibility their efforts in integrating sustainability aspects into corporate governance. It is only through the integration of social and environmental aspects into the company’s strategy and structures that they can be effectively implemented by their own employees and credibly communicated externally.

The involvement of environmental and social aspects into company management therefore strengthens the identification of employees with their company as an important part of society and increases employee satisfaction and retention. External stakeholders, in turn, gain an insight into the company and its strategy of addressing local and global environmental problems.

Natural capital assessment also promotes cooperation and collaboration between the company and its various internal and external stakeholders, such as company departments, consumers, local residents, scientific institutes or NGOs. This gives companies the opportunity to identify changes in society and the needs and expectations of their stakeholders at an early stage, to react to them and communicate the adapted strategy in a clear manner. Examples of this are changes in consumer behaviour, such as increased demand for local or vegetarian products, but also the dissatisfaction of residents with the construction of a new plant and the resulting changes.

Unlike traditional sustainability management tools, such as life cycle assessments, which focus on the negative impact of corporate activities on the environment, natural capital assessments also highlight the positive contributions made by the company.

An example of a positive contribution to natural capital is the cooperation of food companies with agricultural producers. In doing so, sustainable management practices such as mixtures of...
crops as well as ecological structures such as flower strips and hedges for pollinators and birds are supported. These measures create habitats for plants and animals, promote natural goods and services and secure long-term the basis of the food sector.

The SEKISUI Chemical Group is a Japanese group operating within the plastic processing industry. It has nine European subsidiaries that position themselves on the European market with so-called “Environment-Contributing Products”. Compared to conventional products, these products have a lower environmental impact. The improved environmental performance arises at different stages of the products’ life cycle - procurement, production, customer use or disposal. Environmental benefits like emission reduction or noise reduction are recorded by means of a natural capital assessment. On the other hand, the environmental impact arising due to the use of natural resources is also recorded and assigned with a monetary value. The results of the evaluation are used by the SEKISUI Group in customer communication as well as in the development of its sustainability targets. In 2016, for example, the goal was to generate 50% of sales with its Environment-Contributing Products. (SEKISUI Chemical Group CSR Report 2016)

Overall, the assessment of natural capital offers companies the opportunity to present their corporate responsibility as well as the positive contribution to the environment, and to maintain and increase their acceptance and reputation in society.
3. Getting started

Natural capital assessment is still a relatively new topic, with an increasing international interest and being applied by companies from a wide range of industries across the world. An introduction to the topic can be found in the following bibliography, as well as a brief presentation of the Natural Capital Protocol, the only international framework to date.

The publication by Global Nature Fund „How business values natural capital“ provides an introduction to NCA. This publication is available in English and German.


A video of the World Business Council for Sustainable Development (WBCSD) briefly explains the assessment of natural capital for businesses.

https://youtu.be/IyL272Q1N0sh

Recommendations for the monetization of environmental costs are provided by the German Federal Environment Agency in the publication „Economic Valuation of Environmental Damage“. The document is available in English and German and is currently being updated. Publication is scheduled for June 2018.

http://www.umweltbundesamt.de/publikationen

The Natural Capital Protocol is an international framework designed to support businesses to measure and value its impacts and dependencies on natural capital. In addition to the detailed protocol, there are sector guides covering Apparel and Food & Beverage.

http://naturalcapitalcoalition.org/protocol/
A brief introduction to the objective and approach of the Natural Capital Protocol:

The Natural Capital Protocol was published in July 2016 and describes the basic approach to a natural capital assessment. The protocol was drawn up by a wide range of players from companies, auditors, scientists, politicians and members of the civil society. The development was coordinated by the World Business Council for Sustainable Development (WBCSD). The protocol has been designed specifically for businesses and is divided into four phases with a total of nine steps.

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