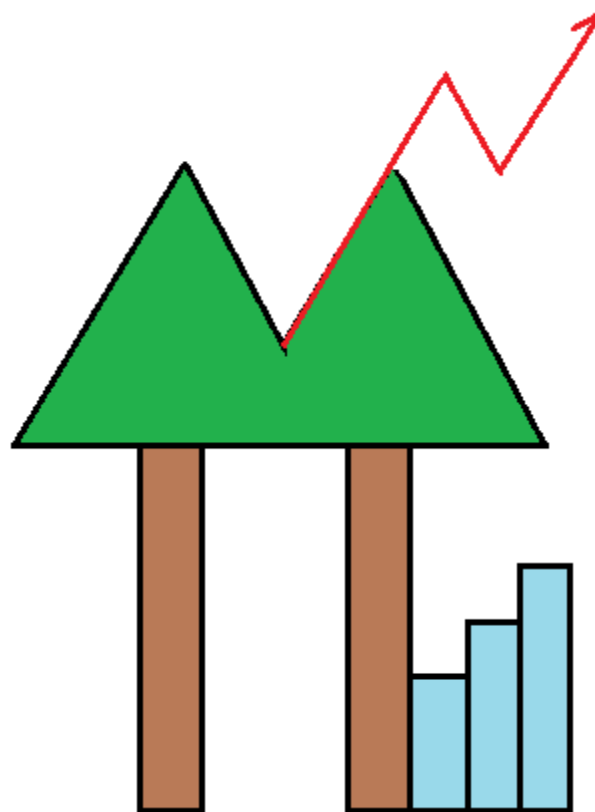


Connecting Nature and Landscape with Business

Final report



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Project: The added value of nature and landscape for the business sector in Twente.
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Executive summary

The purpose of the report is to identify the reliance between the business sectors and nature and landscape in the region of Twente and to develop a framework for the creation of mutually beneficial linkages with the highest potential. Via literature research, interviews and a survey, cooperation opportunities between nature and landscape and the business sector were determined. The most relevant stakeholders were industry, construction, wholesale, business services, healthcare and health insurance companies, logistics, recreation and leisure, food, waste and energy, business parks and municipalities. These stakeholders were chosen, because they are the largest sectors in Twente, have a high impact or have a large influence on nature and landscape.

There are different practice examples of innovative concepts to connect business sectors with nature and landscape with mutual benefits in the Netherlands, namely through financing, market based instruments, like payment for ecosystems and the red-for-green principle. Also the creation of nature, in advance of economy, like temporary nature on empty business sites is a practice example.

Companies are in a way directly or indirectly connected to nature and landscape through their use of ecosystem services, services derived from nature like fresh water. The construction sector has an impact on nature by for instance their use of resources, occupying natural areas and transportation of materials. For construction businesses, working for biodiversity helps to secure licenses to operate from official authorities and local communities. The food sector can cooperate with nature organizations by improving their image with the help of NGOs or by providing locally produced products. The financial sector has little connections with the environment, but can benefit nature and get benefits themselves from banking in a social responsible way. The health sector is dependent on nature by the possibilities to extract pharmaceuticals from nature, by the protection against e.g. flooding and by the restoration of people. The recreation sector can cooperate with nature organizations by improving the attractiveness of nature areas or by the use of bio-cultural creativities, which are innovative and creative concepts that connects nature with people. Business parks are often located on the edge between the city and the rural area and therefore can serve as transitional areas in which small patches of biodiversity can flourish.

A survey was developed to find out the awareness of business enterprises in Twente about their dependence on nature and landscape as well as possible ways of involvement in partnerships towards nature and landscape development and conservation. The overall survey results indicate a low awareness of businesses about their dependencies with nature and landscape. Respondents do admit a need of mutual involvement of public and private sectors towards the management of nature and landscape.

The focus of the interviews was on how businesses value nature, on the dependencies between business and nature, and on the current and potential contribution to nature. Interviews were conducted with four companies in the energy and waste and industry sector, and with the municipality of Enschede. Also interviews with four experts were done. Outcomes of the business interviews are that the impact on the environment is a very important issue and that companies are looking for profitable ways to invest in nature. Moreover, it was shown that image is an important driver for cooperating with nature, but when the financial situation decreases, nature has less

priority for companies. The municipality does not yet really recognize their role, or how to connect nature and business in practice and sees nature of secondary importance.

The interaction between nature and businesses is overall being acknowledged by the experts. An important outcome of the expert interviews was that for companies it is important to be interested in green because of own goals, location development and image. It sells when a company has a green image. The experts believe that Landscape Overijssel should be more pro-active in attracting and approaching companies.

For a nature organization it is very important to pro-actively approach businesses in involving them in nature-related projects. A nature organization should have a leading role in proposing initiatives and creating partnerships. Interesting concepts for a creation of beneficiary outcome for both nature and businesses are already available, and can be linked to business sectors in the region of Twente, so it is important to look at these examples thoroughly and translate them to the situation in Twente.

Samenvatting

Het doel van dit rapport is om de afhankelijkheid tussen bedrijfssectoren en natuur en landschap in de regio Twente te onderzoeken, en om een kader te ontwikkelen voor het creëren van connecties die wederzijdse voordelen opleveren en een hoge potentie hebben. Door middel van literatuuronderzoek, interviews en een vragenlijst zijn samenwerkingsmogelijkheden tussen natuur en landschap en het bedrijfsleven onderzocht. De belangrijkste stakeholders hiervoor zijn industrie, bouw, groothandel, zakelijke dienstverlening, gezondheidszorg en zorgverzekeraars, logistiek, recreatie, voeding, afval en energie, bedrijventerreinen en gemeenten. Deze belanghebbenden zijn gekozen omdat ze vallen binnen de grootste sectoren in Twente, een grote impact hebben, of een grote invloed kunnen uitoefenen op natuur en landschap.

Er zijn verschillende praktijkvoorbeelden van innovatieve concepten in Nederland om bedrijven te verbinden met natuur en landschap waarin wederzijdse voordelen worden behaald. Er zijn concepten die werken via financiering, markt gerelateerde instrumenten, zoals betaling voor ecosysteem diensten, en het rood-voor-groen principe. Ook het creëren van natuur met economische voordelen, zoals het creëren van tijdelijke natuur op een braakliggend bedrijventerrein, is een voorbeeld.

Bedrijven zijn direct en indirect verbonden met natuur en landschap door het gebruiken van ecosysteem diensten, diensten geleverd door de natuur, zoals zoet water. De bouwsector heeft een invloed op de natuur door onder andere het gebruik van grondstoffen, het bebouwen van natuurlijke gebieden en het transporteren van goederen. Investeren in biodiversiteit kan de bouw helpen om makkelijker vergunningen van de autoriteiten en omwonenden te krijgen. De voedselsector kan samenwerken met natuurorganisaties om met behulp van een NGO het imago te verbeteren of door streekproducten te produceren. De financiële sector heeft weinig aansluiting met de omgeving maar kan voordelen leveren aan de natuur en de sector zelf door te bankieren op een maatschappelijk verantwoorde manier. De zorgsector is afhankelijk van de natuur door de mogelijkheid om medicijnen uit de natuur te halen, door de bescherming die natuur biedt, bijvoorbeeld van overstromingen en door het herstel effect op mensen. De recreatiesector kan samenwerken met natuur organisaties door het verbeteren van de aantrekkelijkheid van natuurgebieden of in het gebruik van bio-culturele creativiteit (innovatieve en creatieve concepten die de natuur verbindt met mensen). Bedrijventerreinen liggen vaak tussen de stad en het landelijk gebied in en kunnen daarom dienen als overgangsgebieden waar kleinschalige biodiversiteit kan ontwikkelen.

Een vragenlijst is ontwikkeld om het bewustzijn van bedrijven in Twente wat betreft de afhankelijkheid van natuur en landschap en de mogelijke manieren om betrokken te zijn in partnerschappen met betrekking tot natuur en landschap beheer en ontwikkeling in kaart te brengen. De uitkomsten van de vragenlijst laten zien dat bedrijven een laag bewustzijn hebben van hun afhankelijkheid van natuur en landschap. De respondenten geven aan dat wederzijdse medewerking van de publieke en private sector noodzakelijk is voor het beheer van natuur en landschap.

De focus van de interviews was op hoe bedrijven natuur waarderen, hoe zij de afhankelijkheid tussen bedrijven en natuur zien en hun huidige en potentiële bijdrage aan natuur. Er werden gesprekken gevoerd met vier bedrijven in de energie- en afvalsector en de industriële sector, de gemeente Enschede en daarnaast ook vier experts. Uitkomsten van de interviews met de bedrijven waren dat hun impact op het milieu een zeer belangrijk onderwerp is en dat ze op zoek zijn naar winstgevende manieren om in natuur te investeren. Bovendien werd aangetoond dat imago een belangrijke drijfveer is om te samenwerken met natuur, maar ook dat natuur minder prioriteit heeft als de financiële situatie van bedrijven vermindert. De gemeente herkent haar rol nog niet echt, weet niet goed hoe natuur en het bedrijfsleven in de praktijk kunnen samenwerken en ziet het belang van de natuur als zijnde secundair.

De interactie tussen natuur en het bedrijfsleven wordt door de experts over het algemeen erkend. Een belangrijke uitkomst van de interviews met de experts was dat het voor bedrijven belangrijk is om geïnteresseerd te zijn in groen ondernemen door eigen doelen, locatie ontwikkeling en imago. Een groen imago van bedrijven verkoopt. De experts geloven dat Landschap Overijssel pro-actiever moet zijn in het aantrekken en benaderen van bedrijven.

Het is belangrijk voor natuurorganisaties om bedrijven proactief te benaderen om hen te betrekken in natuur gerelateerde projecten. Een natuurorganisatie moet een leidende rol aannemen om initiatieven voor te stellen en partnerschappen te creëren. Beschikbare interessante concepten voor het creëren van connecties tussen natuur en het bedrijfsleven kunnen gelinkt worden aan bedrijfssectoren in Twente. Het is dus belangrijk om goed naar deze voorbeelden te kijken.

1. Introduction

Nature and economy are often considered as being two opposites (De Boo, 2011). A popular thought is that economic interests are more important than natural values. However, nature is not an opposite to, but a part of economy, as an important economic factor. This certainly applies to a country as the Netherlands, where nature becomes scarcer. This goes beyond a 'price per m²', because nature has multiple meanings. Nature provides ecosystem services, which can be defined as the direct and indirect benefits that people derive from ecosystem functioning (Costanza, 1997). Ecosystem services can be resources like fresh water or food, but also recreational services, as well as regulatory functions like nutrient cycling and primary production (Heijman et al. 2011). Furthermore, nature can also have value for the competitiveness of different regions (Milieu en Economie, 2012). The attractiveness of a region, or the human well-being, can be enhanced by natural values. So, when the interests of nature and economy are considered to be equivalent then nature and economy can reinforce each other (De Boo, 2011; Milieu en Economie; 2012). This also implies that the economic sector and nature conservation organizations are not opposites, but can have shared interests in which they can cooperate. This also creates new financial opportunities for the development of nature, which is necessary as the Dutch government steps aside here (Milieu en Economie, 2012).

1.1 Background

We base our idea on a global precursor in this idea of connecting biodiversity and business sectors is The Economics of Ecosystems and Biodiversity (TEEB) study, which is an initiative of Germany and the European Commission. The background of this study is the human impact on ecosystems worldwide, like unsustainable use of natural resources which is an important factor in the decrease of biodiversity (European Commission, 2012).

Together with the loss of biodiversity, the functionally linked ecosystems services are degraded. TEEB compares the costs of biodiversity losses with the costs of nature conservation. The global decrease in ecosystem services has been investigated, together with the development of possibilities for a practical sustainable use of these services (European Commission, 2012; TEEB, 2012). The TEEB study considers biodiversity, ecosystem services and natural resources as natural capital. In this way ecosystem services can be used as a bridge between nature and sustainable use and development, because it enables the valuation of nature (Termorshuizen et al., 2009). The outcomes of TEEB are relevant for the Netherlands, because they can be used as a framework in showing the value of nature and landscape to society (Van der Heide et al., 2010). A response to TEEB on the national level was the establishment of the Dutch Taskforce Biodiversity and Natural Resources (Van der Heide et al., 2010; The Netherlands Biodiversity Portal, 2012). In this project, cooperation between the economic sector and nature and landscape are seen as an important strategy in increasing sustainable use of biodiversity, and hence in the conservation of nature (The Netherlands Biodiversity Portal, 2012). A report that was published in December 2012, contained an advice on developing and using nature in the Netherlands in a sustainable way, by showing the linkages between nature and the business sector and the interest of natural capital.

The use of these linkages and the support of this vision on the value of natural capital is increasing. It is important that awareness about the potential of linkages between nature and business is created on multiple levels, in governmental policies as well as in the business sector, but this will take time

(Bakema et al., 2011). Nature organizations can play an important role in raising the awareness and in the development of nature-business cooperation programs. An example of such a nature conservation organization on the provincial level is Landscape Overijssel (Landschap Overijssel, n.d. a). Landscape Overijssel achieves to increase the value of nature and landscape in Twente for people, organizations and the business sector. An investigation of the possible linkages between nature and business is a step forward in reaching this goal. A successful example is the cooperation between Landscape Overijssel and the company Roelofs in a project in which unexploited grounds, intended for the development of an industrial park, is turned into temporary nature (Landschap Overijssel, n.d. b). There are more concepts that might be useful for projects in Twente. However, prior to the development of projects an investigation of possible linkages between business and nature is necessary. This is where our research comes in.

1.2 Problem statement

The problem of this project is: What linkages can be found and created between business sectors and the development of nature and landscape in Twente, and which of these linkages have the highest potential for mutual benefit?

This problem connects to a knowledge gap about what direct or indirect linkages exist, do not exist, and can be created. So not only existing linkages can be elaborated and strengthened, but also new linkages are a very important aspect. The purpose of this project is to identify the reliance between the business sectors and nature and landscape in the region of Twente to develop a framework for the creation of mutually beneficial linkages with the highest potential.

This information will enable Landscape Overijssel to involve the business sector more effectively. A better understanding between both sides can be created, it enables the creation of short- and long term solutions for the nature development. It can create more beautiful places to work and live in, and shows the businesses that nature and landscape can have a positive influence on their practices.

In this report the results of our research are described. First, the identification of important stakeholders is given. Next comes a description of the outcomes of the literature research about dependencies between nature and business, and concepts of linkage creation. Then the results from the survey and interviews with companies and experts are analyzed. The last part consists of a conclusion and suggestions for Landscape Overijssel.

1.3 Methodology

The approach of the problem consisted of several elements. First, an analysis of important stakeholders is carried out. Via literature research and the use of demographic data the main players in this research were determined. Information about size and possible impact were used to determine stakeholder groups which were important to investigate and to contact for more in depth research. Following, an investigation of the reliance or dependencies between business and nature and landscape was started with a literature research to get insight in the current theoretical knowledge on this topic. To get a better idea of the vision and interests of companies themselves an electronic survey was send out to a large quantity of companies in Twente, belonging to a wide range of business sectors. The results are analyzed on subtopics, namely business-nature relations, win-win situations and use of ecosystem services. Next to that, interviews were arranged with companies within different business sectors, via direct and telephone contact. The interviews took place at the companies location or at the Wageningen university. The results of the interviews were analyzed with the SWOT approach. Through use of SWOT as strategic planning tool, the strengths,

weaknesses, opportunities and threats in current or possible connections of business with nature and landscape were determined. At the same time, concepts for win-win linkage creation were mapped using literature research as well as practice examples found on the web. For a better understanding of the dependencies and concepts, also interviews with experts in the field are arranged. In the last stage of the project, the dependencies and concepts from the literature research, survey and interview results are combined in order to propose the opportunities of the highest potential for win-win linkage creation.

A mid-term presentation is held in week 6 to show the preliminary outcomes of the survey and interviews and the direction of the project to Landscape Overijssel. The feedback is collected for further improvements of the research.

The final report gives a description of the activities, analyses and advice, and will be presented to and discussed with Landscape Overijssel via an oral presentation. This report also includes a prototype of a marketing material (in Dutch) with the most important outputs of the project, which can be used by Landscape Overijssel in the approach of companies (annex V).

Besides, the project progress was communicated to the 'Knowledge Workplace Twente', a community of research for regional development. The regular updates of project outputs are submitted for the initiative's website to share the knowledge among the stakeholders (educational institutions, government, entrepreneurs and experts) for innovation within the region.

2. Stakeholder identification

In order to find possible linkages between businesses and nature and landscape that form a win-win situation for both parties, we performed a stakeholder analysis to obtain information from businesses. Therefore, a survey is send to companies from different businesses sectors. Moreover, several interviews are conducted to obtain more in-depth information about individual companies in the field of nature and business connections. We first looked at which sectors and other stakeholders have the highest potential for linkage creation between nature and landscape and business sectors, so which business sectors are the most important for us to investigate further.

2.1 Determination of important business sectors

In 2010 the largest business sectors with the highest amount of employees in Twente were industry, construction, retail, wholesale, business services, government and education, and healthcare and well-being (Table 2.1). We decided to look at the largest sectors, because they have the highest influence in Twente and as we expect thus also on nature and landscape. We choose to exclude the retail sector, because this sector is too divers and consists of too many small companies. We also excluded the agricultural sector because many dependencies between nature and agriculture are already known, whereas we wanted to put the focus on less known relations and other business sectors. Beside these largest sectors we also decided to look at sectors that have a high dependency on nature and landscape and sectors that probably have a high impact on nature and landscape. A sector which is highly dependent on nature and landscape is the tourism sector. Sectors that might have a high impact are the industry, waste and energy, food and logistics sector.

Table 2.1: Number of people employed per business sector in Twente (based on Kamer van Koophandel, 2011)

	2006	2007	2008	2009	2010
Agriculture	11.947	11.959	12.142	11.926	11.677
Industry	48.552	49.593	50.012	47.437	44.598
Construction	23.396	24.291	25.535	24.817	23.762
Wholesale	18.267	19.320	20.273	20.240	19.966
Retail	34.044	34.926	36.183	35.838	35.765
Restaurants	11.731	12.031	12.311	12.154	12.097
Logistics	14.382	15.315	16.270	15.689	14.927
Finances	5.221	5.306	5.286	5.063	4.620
Business services	28.089	29.661	31.401	31.782	33.183
Government and education	33.217	33.283	32.833	33.743	33.810
Health and well-being	39.754	40.556	41.906	43.733	43.849
Other services	8.802	9.052	9.162	9.610	9.397
Total	277.402	285.248	293.314	292.032	287.651

Using this information the most relevant business sectors in Twente for the project are:

- Industry
- Construction
- Wholesale
- Business services (including advertising agencies and architects etc.)
- Healthcare and health insurance companies
- Logistics

- Recreation and leisure
- Food
- Waste and energy

2.2 Business sectors for survey and interview

A survey (Annex I) to all business sectors listed above has been sent out electronically to reach as many different types of companies as possible to obtain a wide range of answers. This means that an effort has been put in targeting companies that are close to nature (e.g. recreation) up to the ones that are considered to be further away from nature (e.g. business services).

For the interviews the scope has been narrowed down to fewer sectors to be able to get more detailed information from the sectors that seem to be most relevant. We choose to focus on companies which operate in the construction, industry and waste and energy sector.

Industry is the largest sector in Twente (Kamer van Koophandel, 2011) and has a high impact on the environment (e.g. noise, air quality). We expect industries are willing to cooperate with nature related projects because they have a high impact on nature and landscape. We expect cooperation between nature and landscape and industry can be interesting for Landscape Overijssel for the reduction of environmental impacts. On the other hand, it can also be interesting for the industry sector itself by improving their image and gaining goodwill towards customers and governments.

The construction sector is important for Twente because it secures a high amount of employment. Around 14% of all jobs in Twente are derived from this sector (Stichting Twente Index, 2011). We see linkages between the construction sector and nature and landscape although the construction sector is not doing that well at the moment due to the financial recession. The employment rate in the construction sector has decreased by 4.5% after a rapid growth period between 2006 and 2009 (Stichting Twente Index, 2011). However, still we expect potential opportunities in the future. An important linkage with nature and landscape is that there is a trend that people want to live close to nature and are willing to pay more for houses in these locations. This principle counts especially for houses facing water or open landscapes (Luttik, 2010). While construction companies in Twente are not really investing in sustainable housing at the moment (Stichting Twente Index, 2011), there could be opportunities for them to do so and therefore cooperate with Landscape Overijssel since the location is an important aspect that has a positive influence on the value of a house.

Like the industry sector, the waste and energy sector has a high impact on the environment. In the industry sector sustainable energy sources like solar and wind energy are emerging trends. In the last ten years the market prices for products of sustainable energy have increased from 6.5 to 131.6 billion dollars and are expected to grow even more in the future (Stichting Twente Index, 2011). The waste sector invests in sustainability by the recycling of waste (e.g. biomass and domestic waste). We see investing in nature and landscape as a part of these 'green' innovations. We expect therefore that the waste and energy sector is willing to cooperate with nature and landscape to improve their 'green' image towards customers and also to increase the possibilities for green energy production.

2.3 Other important stakeholders

Besides the above mentioned sectors we also decided to incorporate municipalities and business parks for the interviews. Business parks are considered to be clusters of companies that operate in some of the same sector(s) and are positioned in the same location. These stakeholders are of great importance on the area level instead of on the business level. Business parks are essential, because about 40% of all companies are located in a business park and one third of the national employment is located here (Stichting Twente Index, 2011). There are many opportunities for nature development

in and around business parks. At the moment there is a large amount of unexploited areas and empty buildings which provide opportunities to create (new) nature. Nature has a positive effect on the health of employees and image of a company (IPO, 2009).

Municipalities of Twente are of importance because they can positively and negatively influence companies in working with nature and landscape. Municipalities are responsible for the provision of permits for many projects. They are for example responsible for the spatial planning, the distribution of subsidies, the construction of houses, and the distribution of money obtained from taxes. Therefore the willingness of the municipalities to cooperate is of great importance due to their position. Besides this the municipalities can possibly be partners in nature related projects or have a stimulating role for companies to invest more in nature and landscape.

3. Theoretical and practical concepts for linkage creation

Areas with a beautiful landscape or cultural heritage attract tourists, which could add to the prosperity of regions but can also be an input for enhancing nature. Moreover, nature and landscape are a growing investment market for financial institutions. The business community, small and medium-sized enterprises alike, have a large role to play in delivering biodiversity. At the same time, businesses can benefit from biodiversity and its sustainable management and use (Expertise Centre for Nature Conservation, 2012). While there are already businesses contributing positively towards biodiversity conservation, many more companies can be involved. The challenge is to find ways to connect nature and landscape and business in order to create win-win situations. The creation of linkages between the nature conservation and business sector is an upcoming approach so already quite a lot of literature on this topic is available, as well as practice examples of innovative concepts in the Netherlands. In this chapter, the concepts are described and classified into themes, per theme both literature and practice examples are included.

3.1 Funding and payments

The potential benefits of engaging businesses are vast and varied – ranging from developing capacity of the partnerships to gaining access to sites and resources. A relatively easy way of connecting nature and businesses with mutual benefits is through financing. Businesses can express their valuation of nature via a diverse set of funding possibilities, from which the money is used for the management of nature and landscape.

A first example is the concept of ‘the area-account’ (in Dutch: Rabo Streekrekening), an initiative from i.e. the Rabobank. Businesses can deposit money in a special bank-account. Rabobank donates an amount of 5% of the interest rate of the bank-account to a so-called ‘area-fund’, that finances nature development projects. Also the owner of the account can choose to donate an extra amount of 5 up to 100% of this particular interest rate. Businesses, or collaborations of businesses, municipalities and organizations, can enrol in the Rabo area-fund via a certain protocol. Currently, there are twelve area-funds in the Netherlands. In this initiative, the financing of projects on landscape management is brought together with experiencing nature and culture, a sustainable economic development and nature development (De12Landschappen, 2011a; De12Landschappen, 2011b; Rabobank, n.d.; Streekfonds Flevoland, n.d.).

‘Het Groene Woud’ (in English: The Green Forest) is an example of an organization that uses an area-account for financing the development of both nature and landscape. ‘Het Groene Woud’ is a cooperation of various governments and social organizations as well as businesses, in the area between Eindhoven, Tilburg and ’s-Hertogenbosch. The intention is not only to develop nature and landscape of the area, but also create benefits for the economic sector of the region. This is done by identifying the ecosystem services of specific natural elements like bushes, hedge-rows and ditch sides and hence, the possibilities for further development of these services could be shown (Het Groene Woud, n.d.).

Another innovative concept, created by TripleE, is the VeluweVoucher. The voucher can be used as a gift from a business to their customers, relations or employees. The revenues of this voucher are for the management of a specific nature element, and also activities like a company trip in nature are among the possibilities. Another option is to give the choice to the receiver. The receiver can choose

a specific nature element via an online 'landscape auction' (in Dutch: De Landschapsveiling). The VeluweVoucher creates an opportunity for businesses to invest in nature, which can be directly shown to others (De Landschapsveiling, 2007-2008; Provincie Gelderland, 2010; De Veluwevoucher, 2011).

A concept that is in the category of market based instruments is an example of payments for ecosystem services, taxes and subsidies, mitigation or species banking, certification, etc. For example, payments for ecosystem services (PES) may be understood as a principle – paying for the provision of a service – or as a specific type of instrument. An emblematic PES-labelled scheme is the Vittel case in France, whereby the company has signed contracts with surrounding farmers about changing their practices or giving up their production in exchange for payments in order to maintain the quality of mineral water (Pirard, 2012). The concept of PES can be relevant for ecosystem services in Twente, but this depends on for example cost and involved stakeholders, which need to be determined per specific case.

3.2 Red and green

Financing of nature management projects is only one of the possibilities for businesses. Nature can be supported more directly, next to investing in the economy. The recreational sector is an obvious one in which this can take place. An example is the concept of Singelgolf; golf courses are designed as a network through the landscape and affect both the attractiveness of and harmony with the landscape (InnovatieNetwerk, n.d. d). Also industrial activities can go together with the development of nature and landscape, for instance in sand extraction areas (InnovatieNetwerk, n.d. f).

Connections between nature and built-up areas can be created with for instance the red-for-green principle. The meaning of the red-for-green principle is already in its name; a part of the revenues of existing or new buildings are used for the management of nature in the surrounding area. Red-for-green can contribute to the enhancement of cultural landscape (Schaap et al., 2007; Oude Elferink et al., 2010; Eelerwoude, n.d.).

Knooperven is the red-for-green principle in practice. A 'knooperf' is a cluster of farmyards, and several of these clusters are connected via paths and vegetation. These clusters and connections together form the infrastructure of the landscape. The inhabitants of the farmyards are responsible for the maintenance of the paths and vegetation. A challenge is to also involve companies to enable the economic development in the rural area (InnovatieNetwerk, n.d. b; Knooperven, 2010). Another example is the project 'New Marken'. Historically, these so-called Marken were areas where local communities regulated the surrounding nature. Nowadays, it means living in 'your own nature area'. It is about small clusters of new houses, in small densities, in free accessible and regional nature areas. The inhabitants are responsible for the management of the area, via regulations like a home owners association (in Dutch: 'Vereniging van Huiseigenaren') (InnovatieNetwerk, 2007; InnovatieNetwerk, n.d. c).

However, the red-for-green principle is not everywhere very effective. The process is often a cooperation between many businesses, organizations and authorities and is therefore very complex. This makes the process slow in progress and also more susceptible for delays (De Wolff et al., 2009). It would only enhance a cluttering of the landscape (Stichting Natuur en Milieu, 2009). Next to that, the management of nature lags behind often. The ones held responsible for nature management in

these projects do not always have enough knowledge and cannot deliver a good quality (Kuit, 2012, personal communication).

The red-for-green principle might have its downsides as described in the previous paragraph, but just a combination of red and green can already create possibilities for connections of economy and nature. Both red and green are also present on business parks and industrial parks. These places can hide valuable and special natural elements, like rare bird species. Moreover, these areas have a high potential for a contribution to nature conservation via a more ecological and green design of the park (e.g. green roofs). This goes hand in hand with benefits for the image of a company, energy savings and a better working environment (Alterra, 2011).

Snep et al. (2008) summarized possibilities for creating green on business sites. They found for example that there is a high potential of using flat roofs of company buildings for new nature habitat. These habitats can play a valuable role in biodiversity conservation and development. For example, green or gravel roofs can play a role as breeding or feeding habitat for birds and insects (e.g. bees) and provide space for plant species. Secondly, the ecological value of other green area or elements at business sites can be improved. A third possibility is better using the potential for temporary habitats on vacant lots. Business sites tend to have a high proportion of derelict land, which then becomes available for flora and fauna for a certain period. Often, the ecological value of these areas has a high ecological value. They can serve as a suitable habitat for pioneer species and for colonization by endangered plant and animal species. This type of biotope can thus contribute significantly to the overall habitat potential of a business site. Fourth is enhancing the green infrastructure at business sites with additional green areas. The larger the green area, the greater the species richness that may be expected. As a last, implementing habitat corridors in the design and management of business sites is among the possibilities. Ecological corridors are used by plant and animal species to migrate between different habitats or areas. Business site habitats could support ecological corridors when these are located near the business site (Snep et al., 2008). It was shown that 606 (mainly suburban) business sites in the Netherlands are located adjacent to or in the direct vicinity of ecological corridors or areas important for biodiversity conservation (Snep et al., 2008).

Not only highly commercial companies can benefit from connections with nature, it can also be beneficial for companies related to human well-being. Nature can have a positive effect on cure and care (healthcare) and wellness (recreation). In this context, the concept of health landscapes has been introduced. This concept is based on a cooperation between landscape management, healthcare, recreation and agriculture, which can enhance the quality of an area together. So can healthcare organizations provide an infrastructure for nature development, or can nature areas become an interesting location for the establishment of healthcare centres (InnovatieNetwerk, n.d. a).

3.3 Creation of nature, in advance of economy

Next to supporting nature in financial or other more indirect ways, the concept of temporary nature is an example of direct creation of nature. In this idea construction sites are given to nature as long as they are being unexploited. Mutual benefits are created because the area can serve as a nursery ground for pioneer species, while it is cost-effective for the company because of a less intensive management of the area. The two main requirements are a minimum duration of one breeding season and an exemption on the Dutch law on Flora and Fauna. A practice example can be found in Steenwijk, in a cooperation project of Landscape Overijssel and Roelofs, a company on project

planning. 64 hectares of land near Zwolle, intended for the development of an industrial park, are given to nature as long as the land is unexploited (InnovatieNetwerk, n.d. e; Landschap Overijssel, n.d. b).

3.4 Other innovative concepts

An idea that can be linked to the creation of green business areas is the placement of so-called 'bee hotels' on for example flat roofs of company buildings. These bee hotels serve as nesting sites, which help in preventing a further decline of bee populations (Stichting Natuur en Milieu, 2011a; Stichting Natuur en Milieu, 2011b). Related to companies that have a negative impact on the environment via e.g. emission, is the concept of the buying so-called CO₂ rights in new forests. In this way, companies can compensate for their own CO₂ emission because of the storage of CO₂ in these new areas (De Vré, 2012).

Completely different is the concept of nature graveyards. One hectares of land provides space for 80 graves of for instance 2500 euros each. This money can be used for financing the management of the nature in the same area (De Vré, 2012). As a last, 50 ideas for the creation of new forest in the Netherlands are bundled in a brochure from InnovatieNetwerk (Vos, 2010), in order to make forest and nature less dependent on subsidies. The creative ideas range from a supermarket with a recreation place next to it, to roof parks and even visualizing brand names on GoogleEarth via forest design.

3.5 Possible evaluation tool

Multi-criteria analysis (MCA) is used to examine scenarios for enhancing biodiversity at business sites (Snep, 2008). MCA is a decision aid and mathematical instrument that enables the assessment of different scenarios according to many criteria, to guide decision-makers towards a sensible option. The analysis explores social, economic and environmental effects of different business site scenarios that include a range of biodiversity-oriented design and management measures. In doing so, it provides alternatives for traditional business site design and supports the decision-making process among public and private actors seeking sustainable business sites. Biotic aspects of business site environments are not fully addressed yet; therefore MCA concept can be used to enhance biodiversity at business sites. An example of an outcome of MCA analysis is that business sites with large number of urban green were favoured by all shareholders. With this MCA framework it was shown how different stakeholder groups (companies, employees, local governments, neighbours and environmental NGOs) in the Netherlands may rank scenarios for enhancing biodiversity at business sites, based on what stakeholders do prefer. More information about the use of this tool can be found in Snep et al. (2008).

4. Dependencies between businesses and nature and landscape

Companies are in a way connected to nature and landscape, although it might not always be clear in what particular way. Forestry and recreational companies are more directly connected than companies in the financial or logistics sector. There is a change in the vision of NGOs (Harms et al., 2011). Before, NGOs were seeing companies as being the cause of problems (Nijhof et al., 2007). The organisations were especially busy with sending out information in which they stated social and ecological issues by ‘attacking’ the companies and criticizing them on their impacts (Overbeek et al., 2011). However, the way of approaching companies has changed. Organisations are communicating better with companies and directly address their responsibilities to them (Overbeek et al., 2011). Companies on the other hand are getting more interested in working together with NGOs because public acceptance and a good reputation have become important conditions for them (Harms et al., 2011). Remarkable about these developments is that companies are slowly getting familiar with their use of certain ecosystem services and what they can do to develop and conserve nature and landscape.

The importance of biodiversity is gradually being included in the corporate policies. However, large and small companies and companies from different business sectors cannot be seen in the same way. Large corporations may in general have a larger effect on the environment while they may be more able to compensate for it. Smaller companies probably can be closer in contact with local actors and can be looking for projects with nature organisations that are feasible for them.

The value of biodiversity and ecosystem services can best be shown to businesses by connecting nature to business locations, business processes and product chains (Joldersma et al., 2010). In this way it separates the different business elements from each other and it becomes a little less difficult to distinguish how and where the company has an impact on biodiversity and how it can improve its interaction with nature.

Several dependencies between companies and nature and landscape can occur. The major connections for dependencies are the use of natural resources as an input (timber, food products), the use of services in the production process (clean water, fertile soil), the location in natural areas or the creation of natural areas for production. Also the public opinion towards NGOs and governments and the use of certificated/eco products are important connections (Overbeek et al., 2012).

Businesses are dependent on nature and landscape by their usage of ecosystem services. Nevertheless the industrial, capitalist thinking of the corporate world still takes these ecosystem services for granted (Barcellos Harris, 2010), because they mainly consist of public goods, which means they can be used for free. The services can be divided into different subgroups (Table 4.1).

Table 4.1: Ecosystem services per subgroup (based on Millennium Ecosystem Assessment, 2005)

Sub group	Service
Provisioning services	Food Timber Fibres Genetic resources Bio chemicals, natural medicines, pharmaceuticals Fresh water

Regulating services	
	Air quality regulation Climate regulation Water regulation Erosion regulation Water purification and waste treatment Disease regulation Pest regulation Pollination Natural hazard regulation
Supporting services	
	Soil formation Photosynthesis Nutrient cycling
Cultural services	
	Spiritual and religious values Aesthetic values Recreation and ecotourism

Companies are mainly connected directly to the provisioning services and the cultural services in the form of products and services a company produces. More than a third of the world's economy has biological products or processes as their primary source (Business and Biodiversity Campaign, 2010). Therefore the provisioning services, consisting of raw materials, have such a direct relation with businesses. When resources are threatened in quantity or in quality a company will notice the effects directly and has to make sure that resources are still available in the long run. To continue in the future, a company has to use its resources in a sustainable way or it needs to look for alternatives (Joldersma et al., 2010). Cultural services consist of recreational values and the 'green experience', which are for instance valuable for the tourism sector. The supporting and regulating services mainly have an indirect value for the production process (Joldersma et al., 2010). Supporting services are important for the agriculture, food and retail sector, while the regulating services are of great value for water supply companies. The relation with ecosystem services is not equally clear for all business sectors. For instance the agricultural and the tourism sector are directly dependent on the services, while the food and retail sectors are mostly indirectly dependent by means of agricultural products and raw resources (Overbeek et al., 2012).

Companies and nature and landscape can benefit from each other if the ecosystem services are implemented in a company's corporate social responsibility policy. Corporate social responsibility (CSR) is a way of how companies can deal with the increasing attention from customers, governments and NGOs to work on their environmental impact. By using CSR companies can improve their interaction, dependency and care for biodiversity. If biodiversity is well incorporated within CSR, it can provide a structured and credible way for companies towards proactive integration of biodiversity into their operations (Earthwatch Institute, 2004). There can be several motives for a company to work on biodiversity issues (Joldersma et al., 2010):

- Reputation and/or image of the company;
- Benchmarking, connected to reputation and image;
- Cost reductions;

- Customer satisfaction;
- Risk management;
- Relationships with stakeholders.

The reputation and/or image of the company can depend on the way they deal with biodiversity issues. Nature organisations can damage the reputation of companies that are not sustainable in their production process (Harms et al., 2011). On the other hand when companies are connected to a NGO, they could get a green image and so attract more customers or get a better relationship with stakeholders. What is important to companies are the (financial) benefits these investments and participation in nature-based projects generate. They want to see what is in it for them and in what way their investments are coming back to them (Overbeek et al., 2011). CSR is implemented more in policies of larger, national oriented companies. Smaller, locally oriented companies still value CSR less because of its formality and its communication. Local companies are more interested in doing a direct approach with direct actions (Harms et al., 2011).

A non-financial way to connect businesses with nature and landscape is by sharing knowledge. The knowledge of nature organizations and businesses can complement each other so both parties can increase their overall knowledge on for instance marketing or sustainable production. Moreover the sharing of resources can also be beneficial for both parties (Harms et al., 2011). For instance businesses can lend out staff to nature organizations and nature organizations can organize nature trips for businesses or can provide new potential customers to businesses out of their own network of members (Harms et al., 2011).

4.1 Construction sector

The construction sector is a large sector and it is divided in many subsectors. Because it is such a large sector the use of (natural) resources is substantial. It is a sector that is operating on small scale as well as large scale which also means that it interacts with many other sectors.

The construction sector involves a multitude of actors and stakeholders, including building material manufacturers, building and construction companies, small and medium-sized enterprises (above all those engaged in trade), unions, planners, environmental NGOs, users, governmental institutions, financial institutions and research institutes (Wallbaum, 2003).

In the interaction with nature and landscape there is little doubt that the construction sector does have an impact. To name a few: sometimes natural areas will have to make way for construction sites, resources for buildings are always needed and a lot of transport is included to get every machine, tool and material in the right place.

When considering the potential nature conservation impacts and opportunities of the sector it is probably appropriate to recognise four main subdivisions (The business and biodiversity resource centre, 2012a):

- Housing (both public and private);
- Commercial development;
- Industrial development;
- Civil engineering infrastructure (such as water treatment and distribution, roads, railways and airports).

This divisions a recognition of possible differences within the construction sector in general. Actors (e.g. companies and clients) which are involved in the construction of houses deviate from actors

that are working in civil engineering infrastructure. The way of working and scale may be very different, but both parts are considered to be inside the construction sector. For this reason, the sector will be discussed as a whole in order to provide an insight on how the interaction between construction and biodiversity can be seen, and how it could be improved.

Bourdeau (1999) provides a table (see Table 4.2) in which he very elaborately explains which topics can be researched and developed inside the sector for a better understanding of its environmental impacts. It is a sort of tool by which one can see which topics are relevant for making the connection with the (natural) environment and what aspects of each topic can be distinguished.

Table 4.2: Main recommendations on Research & Development topics (Bourdeau, 1999).

Topic	Aspects
<i>Built environment and ecological systems</i>	<ul style="list-style-type: none"> - understanding impact of built environment on eco-systems - producing environmental qualities for building parts and buildings - investigating problems and solutions for the sprawl of city agglomerations
<i>Energy saving</i>	<ul style="list-style-type: none"> - innovative design, systems and products for energy-efficiency goals: integration of solar (and other renewable energy) systems, retrofitting adapted systems - developing energy efficient design of low cost housing - assessment of embodied energy for the choice of materials and construction technologies
<i>Health and comfort</i>	<ul style="list-style-type: none"> - understanding impact of built environment on health - improving air quality - improving clean-up procedure for contaminated land
<i>Waste</i>	<ul style="list-style-type: none"> - improving waste management (work sites and communities) - reducing the environmental impact of construction waste through minimization and recycling
<i>Resources saving</i>	<ul style="list-style-type: none"> - water-saving devices in both new and existing buildings - systems for capturing rain water - developing the use of indigenous construction materials - recycling, re-use and substitution by renewable materials - developing ways for an efficient use of raw materials (service life, system repair and retrofit, improved quality of materials, components and services) - developing new innovative materials - developing the life expectancy of indigenous construction materials and technologies
<i>Building stock</i>	<ul style="list-style-type: none"> - upgrading performance of existing building stock - models for service life prediction - new technologies/systems for renovating and retrofitting
<i>Tools</i>	<ul style="list-style-type: none"> - best practices in sustainable buildings - reliable labelling scheme - inventory of all life cycle costs and suitable indices for measuring pertinent performance - tools to estimate preference for temporary buildings or long-lasting buildings - the development and dissemination of methodologies of reviewing environmental impacts
<i>Building process</i>	<ul style="list-style-type: none"> - pushing life cycle thinking as the guiding principle for construction processes - the need of a thorough study of the on-going processes in the national and international building field - renewal engineering methods - materials and systems: new function integrated building components, durability, reparability and retrofit ability of the products

This list makes clear that a lot can be done in the sector to improve its impact on the natural environment. It will not be possible for businesses and other actors to include all aspects in one or more upcoming projects, but it is the focus and line of thought that should be affected by this table. It is about creating awareness in which topics and what aspects things could be improved. For

construction businesses, working for biodiversity generally means good business practice; it helps to secure licenses to operate from official authorities as well as the local communities in which construction has been undertaken (The business and biodiversity resource centre, 2012a). There is a lot that can be gained for the sector when it takes biodiversity issues more into account. The challenge for the industry is to identify new and innovative practices, technologies and ways of working which satisfy the need for a modern, competitive, efficient, responsive and socially responsible industry (Bourdeau, 1999). It is a difficult challenge which might take years to develop and implement, but Bourdeau (1999) argues that it is most important that the achievement of sustainable construction will depend on the industry's willingness and ability to drive much of this change. Like many other sectors, the feasibility and (economic) benefits should be clear, otherwise the willingness of companies and other actors to plan for biodiversity and take it more into account may not be that high.

4.2 Food sector

The food sector depends mainly indirectly on nature in the form of supporting services, like nutrient cycling (Overbeek et al., 2012). The sector depends on nature through different actors in their supply chain, for example the farmers that produce the products and the logistic companies that transports the products. Food companies are willing to produce their products in a more sustainable way and consumers on the other hand have an increasing preference for sustainable products (Backus et al., 2011). Research shows that the choice of food is dependent on the fact if the consumer is a member or sponsor of a NGO. People related to NGOs are more willing to buy healthier, environmental friendly and Fair Trade labelled products (Backus et al., 2011). Therefore NGOs can be of great importance for companies in the food sector. NGOs can help the food sector because of their influence on the social environment of consumers and they can mention the importance of sustainable food in the media and which companies are involved and which are not. They can facilitate companies by creating public awareness about sustainability and they can help companies to formulate a sustainable business plan (Backus et al., 2011). Decreasing food waste is a way companies can show they believe sustainability is of importance (Overbeek et al., 2012). Nature organization could cooperate with the food sector by creating awareness towards food wastage and so help companies with their image towards sustainability. NGOs can do many things for companies in the food sector and the food sector can decrease its impact on the environment vice versa. It is difficult to find any direct profits (besides sponsorship) for nature and landscape on a regional scale, but there are direct profits for companies in the food sector.

The food sector can as well be directly dependent on nature and landscape in the form of provisioning services. Locally produced products can have great opportunities for businesses and for nature and landscape and can have benefits for nature on a regional scale and also for locally and (inter)national oriented businesses. Extracting non timber forest products (NTFPs), like mushrooms and fruits but also animal products like meat from large herbivores, can create an extra income for nature areas. An example of a product line for locally oriented products is the brand 'Waddengoud'. This is a certified label for products and services from the Wadden area created to promote the area. Under the label are products like cheese and meat, but also services like events and excursions (Waddengoud, n.d.). The brand facilitates the area of the Wadden by attracting people to the area and by giving it a good image. Koninklijke Friesland Campina is an international oriented company, for the German market they had developed the brand 'DeichGold', which made a specific cheese made from milk from the Wadden area. Friesland Campina recently stopped the production in May

2012, because the brand did not make enough profit (EVMI, 2012). Just like 'Waddengoud' this brand was also connected to a certain image that helps selling it to consumers (De Blaeij et al., 2011). There are possibilities for a cooperation between nature organizations and food related companies to create such a brand for locally produced products in Twente.

4.3 Financial sector

Financial sector is so various that it comprises different businesses like banks, insurance companies, investors, real estate businesses and pension funds. This sector does not pay enough attention to biodiversity issues since probably it has less relationship with the environment in comparison with other industries. Nevertheless, this trend is getting better and better. Both creditors and investors are aware of the risks postured to their investments by biodiversity. This environmental issues can rise project costs and liabilities and influence the companies license to operate in the future (The business and biodiversity recourse center, 2011). Of course, it is not an easy issue for financial sector to cope with biodiversity, but it is an important in many aspects of environmental risk.

For the financial organizations is very important to define which companies can put themselves at biodiversity business risks more. It can be companies that strongly influence the ecosystem services, for example, forestry and construction sector, oil and gas or companies that rely on them, like tourism, agriculture and fisheries (Mulder, 2007). That is why for them it is essential to look for the reputation, liability risks, shareholder value of the company, do the company have the license to operate (social and legal) or not. For example, liability risk means that if the polluter will damage the nature he has to pay; or shareholder value is about the effective financial performance of the company. Reputational risk is always important because if the company wants a long term relation with their clients it has to think about its reputation as well.

Nowadays, a lot of banks are willing to cooperate with and fund companies that are working on projects that have less negative influence on the environment. A number of banks have accepted the Equator principles as strategic norms. The Equator Principles are financial instrument for evaluating and managing social and environmental risk in project financing. According to these tool projects are funded by banks corresponding to social and environmental principles. Following the environmental management plans, "Equator banks" are likely to reconcile activities with their clients for the mitigation, monitoring and management of such risks. And if the Equator criteria are not met, banks can make adjustments, can even abolish credits or request instant repayment (Equator Principles, 2011).

Nowadays the concept of 'green banking' has become so fashionable and actual. 'Green' bank is a bank that is anxious with the environmental and social impacts of its investments and loans. They have a set of principles that are targeted to finance the projects with the environmental aim. Two banks in the Netherlands have expanded the range of its activities from savings to different kind of products. Also they will rise their services using green credit cards, green mortgages, green insurances, etc. (Eco-innovation observatory, 2011).

Social responsibility is the key driver for 'green' banks. The ASN Bank was founded by a Dutch trade union in 1960 and offer savings in a socially responsible way. ASN Bank now has more than half a million customers and a capital of 7.5 billion euros. They are now investing in governments, companies and projects, working in a responsible way with people and animals, nature and environment (Eco-innovation observatory, 2011).

Triodos Bank started in 1980 with the idea that money of the clients can bring a positive change. The Triodos Bank has a capital of €4.9b. In 2009 Triodos bank was recognized as Financial Times

Sustainable Bank of the year (Eco-innovation observatory, 2011). The key focus of the bank is to finance the sustainable environmental businesses and projects in all sectors. They do not lend money to the organizations that do not have sustainable products and services, like production of weapons, tobacco, and pornography. Also they do not lend money to non-sustainable working processes where animal testing and inhumane farming methods occur, corruption can emerge and dictatorial regimes. Triodos bank is now involved in more than 300 projects on sustainable energy all over the Europe (Triodos bank, n.d.).

In the Netherlands Rabobank and ABN AMRO banks are already working on the Equator Principles' framework. But Rabobank have more involvement on environmental issues. Followed by Equator principles the bank has made a CSR report which has its own sector guidelines in: agriculture, chemicals, energy, fisheries, forestry, leisure, metals and mining, oil and gas, energy and climate, freshwater and infrastructure (Mulder, 2007).

ABN AMRO apart from the forestry sector also have developed guidelines in other sectors (e.g., freshwater infrastructure, metals and mining, oil and gas, chemicals and climate). Even if these sector-specific guiding principles do not pose direct influence on biodiversity, stages are used as tropical humid forest, precarious natural habitat or exhaustion of natural resources that grab the value of biodiversity to a certain level (Mulder, 2007).

4.4 Health sector

Pharmaceutics has always been a scientifically-intensive industry. From ancient times until now people are looking for medication to treat diseases. So many problems arise with the diseases, even with small disease like cold. That is why we are always looking for solutions on how to protect our health. Thus, we can conclude that pharmacy is an essential part of people's life. Nowadays it is impossible to imagine life without pharmaceutical products, including a different range of tablets, capsules, ointments, powders and teas.

Pharmaceutical industry very much relies on natural resources. Plants, fungi, marine organisms, insects and animal genetic resources are among the wealth of sources from which medicinal products have been made. Only 15% of plants have been examined for their potential use (The business and biodiversity resource centre, 2012b). Still, a lot of research can be done. Pharmaceutical industry, if working with the biodiversity, can significantly influence the quality of life positively.

Apart making medicines, nature can affect human's health physically as well. For example, trees help to maintain the quality of the air, protect homes from the sunlight or the wind, and flooding. Also trees challenge health by discharging pollen, harbouring disease-bearing insects, and posing hazards from fire and falling objects (Berg et al., 2012).

Restoration is another effect that people can receive from nature as a way to get rid of stress. The fact that many people like to visit natural areas in order to get away from the everyday life routine, to relax and relieve the intension not new.

It is well-known that nature can facilitate the health and well-being. For example, according to the survey that was conducted in the Netherlands on the national level 92 per cent of respondents noted that when they visit nature it gives them healthy feeling. Initiatives that make use of the healing powers of nature have emerged and prospered in many countries. Some well-known examples are the 'green gyms' in the UK, the 'udeskole' or outdoor education programmes in Denmark and 'shinrin-yoku', a popular Japanese practice which refers to the act of visiting nature areas for therapeutic reasons (Berg et al., 2012). In The Netherlands these kinds of practices are also present,

for example, care farms. It is a combination of good work, atmosphere, nature and care for people with psychological and psychiatric problems, prisoners, problematic youths, people who cannot find work and elderly people who wish to find quiet, friendly surrounding. Also, these farms can offer kinder garden for children with special needs (Handbook for Dutch care farms, 2011).

4.5 Recreation sector

Nature areas are an attractive environment for many people. Besides being in a nature area or just thinking about one can stimulate positive feelings for people (De Blaeij et al., 2011). Whether people value a certain nature area highly differs per type of nature and does not always depend on if the area has a high biodiversity or not (Fontein et al., 2009). Thus nature conservationists can have a different vision compared to the tourism sector.

People will prefer a recreational facility, like a restaurant, when it is located close to nature (De Blaeij et al., 2011). Research shows that the employment rate of companies in the recreational sector, like restaurants, pubs, campsites and hotels, is higher than recreational companies located farther away from the 'The Dutch National Ecological Network' (EHS). In this research, this was mainly the case for coastal and forest areas (Polman et al., 2010). The effect of the increasing employment rate depends on the size of the nature area and the distance from the nature area. There is a decrease in amount of employees when the size of the EHS area is smaller and/or the distance between the EHS area and the recreational facility is larger (Polman et al., 2010). This difference in employment rate is barely noticeable in medium size facilities (Polman et al., 2010). Although the effect is small, the business can benefit from nature as stimulating factor for the popularity of the business (De Blaeij et al., 2011).

There are cooperation possibilities between nature and landscape and businesses from the recreational sector which include benefits for both sides. Businesses can cooperate with nature organizations to enhance the quality and quantity of nature on and near by the business' property (De Blaeij et al., 2011). Moreover recreational businesses can invest in the infrastructure of nature areas by for example creating walking routes. Companies can invest in better visual appearances for nature areas by for instance building nice looking play areas (De Blaeij et al., 2011). Furthermore, nature organizations and recreational businesses can together organize excursions. These opportunities can improve the attractiveness of the area and so attract more customers and better prospects for the businesses as well as for nature areas (De Blaeij et al., 2011).

Another way to create linkages between nature and the recreational sector is bio-cultural creativities (Elands et al., 2012). Bio-cultural creativities are innovative and creative concepts that connects nature with people. Elands et al. (2012) states different examples of these types of opportunities to bring nature and people closer together. The development of adventure forests or climbing forests and wilderness survival trips are an example to create more awareness for nature. Adventure forests or climbing forests can consist of canopy trail which create a new layer of landscape in forests which can make tourists more aware of ecological aspects of nature (Elands et al., 2012). Another way to create new opportunities for a cooperation between nature and the recreational sector is by using the spiritual values of nature. The wAarde Foundation has developed in 2012 an Avatar forest located between Zoetermeer and Waddinxveen. The idea is to create a forest that represents the movie Avatar (2009) with a dreaming away feeling (Elands et al., 2012). This is supposed to attract teenagers for whom virtual reality is a natural part of their daily lives (Elands et al., 2012). These

examples could lead to an increase in the number of visits to nature areas and on the other side create more awareness and possibly money for nature areas.

4.6 Business parks

Business parks are places in the landscape that cluster several companies from the same or different business sectors in one place. There are different types of business sites and the activities performed by the companies located at the site determine its character. Because these sites include many companies at one place, it provides good opportunities to make the connection between business and biodiversity. Pellenbarg (2002) argues that business sites are a land-use type for which sustainable development is increasingly being called for. From that perspective came forward the concept of eco-industrial parks. This concept is developed from the crossroads of two trends, namely segmentation in the location market and the wish to reconcile the economy and ecology (Pellenbarg, 2002). Another important aspect of business sites is that they are seldom included into the urban landscape, nor have business sites been considered a potential part of the rural landscape (Snep, 2009). Often, you see them located on the edge between the city and the rural area. For that, it may be possible that business sites fulfil a specific role in the overall landscape. They can serve as transitional areas in which small patches of biodiversity can flourish. Figure 4.3 is an example of how business parks can serve as a link in the connection of urban areas with rural landscapes:

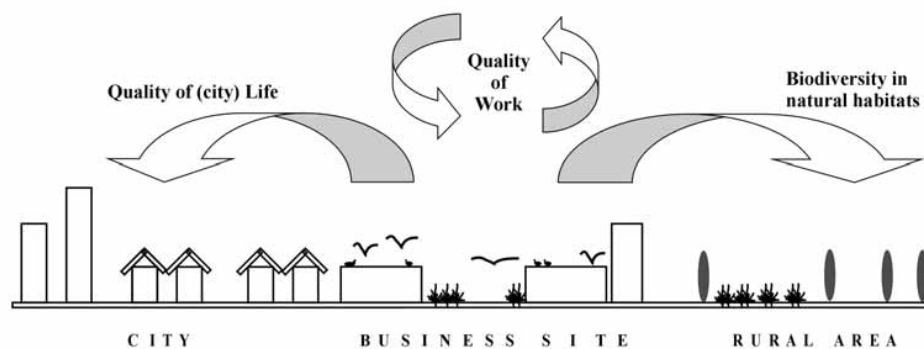


Figure 4.3: Illustration of how biodiversity conservation measures taken at business sites may contribute to the biodiversity in urban and rural habitats, the quality of city life and the quality of conditions for work (Snep, 2009)

The role as a linkage between the city and rural areas is important. It is not only making places where people work more attractive, it also provides valuable pieces of (temporary) nature for specific (plant) species. Furthermore, Snep et al. (2011) identified a subset of 93 business sites in the Netherlands with the potential to contribute very substantially to butterfly conservation. This study shows that business sites even can fulfil a role in which very vulnerable species like butterflies can prosper.

However, the potential of business sites does not only come from its location. Other important aspects are (Snep et al., 2008):

- The design of business buildings;
- Land dynamics at business sites;
- The human uses of business sites.

Business buildings quite often have flat roofs, companies may have more land in possession for possible future expansion and mostly humans are only present in the hours from nine to five during the day (Snep et al., 2008). These are all factors that can be used for the benefit of biodiversity and eventually for the business site itself.

Still it remains crucial that companies at the sites have the interest to participate in these kind of opportunities for biodiversity enhancement. In the case of the eco-industrial parks Pellenbarg (2002) argues that these parks will only be successful if individual firms believe they will obtain some sort of benefit in economic terms from their location on these parks. Companies may be hesitating to participate because they cannot see the benefit from it. Also, they might have some fears of not being free to adapt the firm's functions and processes to whatever changes are needed in the future business environment (Pellenbarg, 2002). These aspects should be taken into account as they are important for companies. Pellenbarg (2002) indicates with this when companies have a clear understanding with the participating actors and have to a certain extent the freedom to adapt to external changes in the future, they might have more interest in participating in such projects.

In a way, one can make the distinction between an internal and external perspective regarding business sites. The external perspective is the wider picture about the (possible) function of the site in the landscape and its possibilities as a linkage between the city and rural areas. This perspective is more about how the business site can be positioned in the surrounding landscape and what other roles than economic ones it can fulfil.

Regarding the internal perspective, which can be explained as the construction of the business site itself, the article of Snep et al. (2008) constructed six potential scenarios to enhance biodiversity at business sites. These scenarios show how a business site can be constructed for biodiversity enhancement in different ways (Figure 4.4).

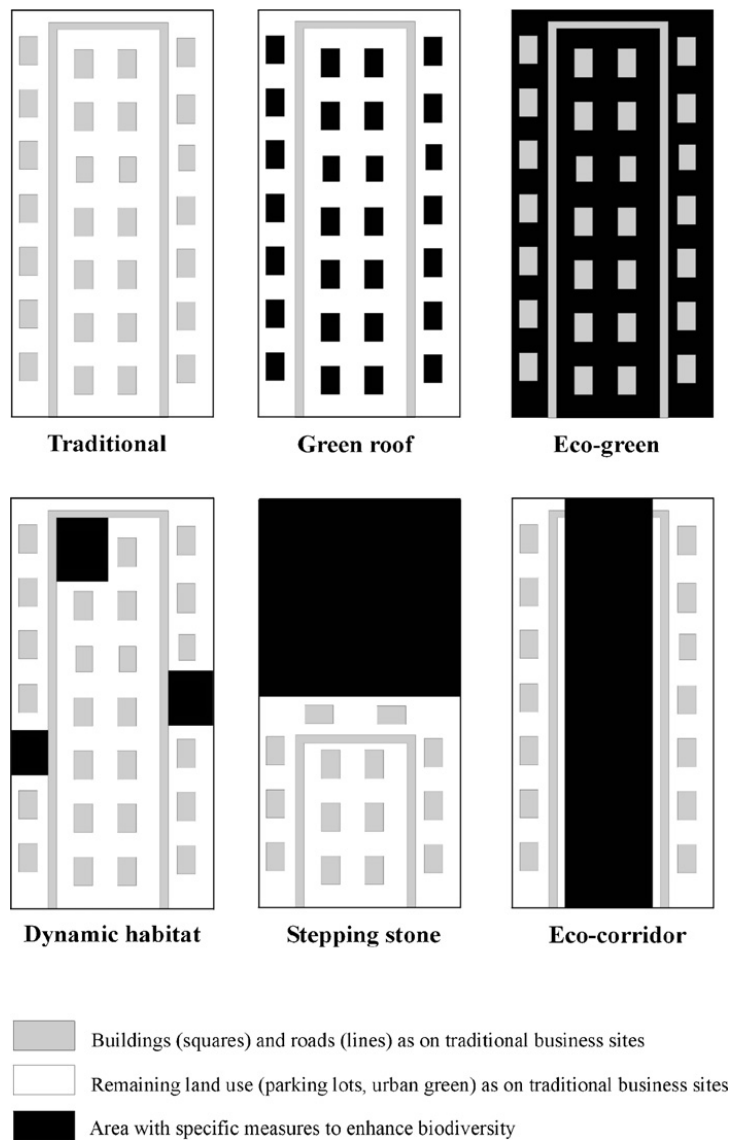


Figure 4.4: Six construction scenarios for business sites (Snep et al., 2008)

The scenarios are explained as follows (Snep et al., 2008):

1. The traditional scenario

The traditional scenario reflects the current situation of most SME business sites in the Netherlands. A main road throughout the site provides access to all business parcels.

2. The green roof scenario

In the green roof scenario, the flat roofs of all buildings are designed and managed as green roofs.

3. The eco-green scenario

In the eco-green scenario all ground-level green area is maximized for biodiversity purposes: lawns are replaced by flower-rich grasslands, and native and species-valued plant groups are used for shrub and trees.

4. The dynamic habitat scenario

The dynamic habitat scenario contains three parcels of derelict land in the form of vacant lots between buildings.

5. The stepping stone scenario

The stepping stone scenario features a green area measuring 50% within the business site, managed as biodiversity and open to the public. This means that the remaining land can accommodate only 14 business parcels.

6. The eco-corridor scenario

In the eco-corridor scenario, an ecological corridor bisects the business site, so as to fully utilize the potential of peri-urban business sites to link urban and rural biodiversity. Company buildings are situated along a main road with the ecological corridor located in-between the rows of buildings. Where the main road crosses the corridor zone, fauna passages are constructed to mitigate the road's barrier and mortality effects on ground-dwelling animals.

Snep et al. (2008) provide six scenarios of which five have possible actions that can be undertaken on the site to enhance biodiversity. Some scenarios are more close to very complete 'green' business sites (eco-green) and others need less effort to be completed (dynamic habitat). Still they are a good consideration of what can be done and how businesses and other actors could approach the issue of green business parks.

Joldersma et al. (2010) provide an additional list of direct measures which can be undertaken to enhance biodiversity at business sites. This list shows ecosystem services as well as the intrinsic value of biodiversity (Joldersma et al., 2010).

- Green walls
- Facilities for birds and hiding places for bats
- Green parking lots (open tiles)
- Connection to surrounding landscape or ecological connections
- Multifunctional green construction of terrain (personnel and biodiversity)
- Use of endemic plant species (trees)
- Special facilities for special animal species (kingfisher, hedgehog, butterflies)
- Measures for decreasing the length and intensity of light
- Use of sound prevention and less noisy machines and tools
- Adapted ecological management of green (mowing)
- Sustainable weed management
- Open up 'business green' for public (walking paths, allotment)
- Recovery projects
- Nature development
- Zonation

It is not that these aspects should all be present at every business site but they do offer an insight in what is possible. Business parks and participating actors like businesses, municipalities and nature

organisations could make use of such aspects to improve biodiversity at business sites. It is about showing the companies what is in it for them and why it is so important that biodiversity at business sites is at least present, because, in the end they have a huge potential to become better and more attractive workplaces and to become an ecological link between the city environment and rural landscape.

4.7 Conclusion

In this chapter we investigated the dependencies between businesses and nature and landscape derived from the literature. It shows that businesses can depend on nature directly by the use of natural resources (timber, food products) as well as indirectly by the restorative effect as a way to get rid of the stress. The best way to show the importance of biodiversity to businesses is to link the nature with business locations, business processes and product chains. It is important to be aware on how companies rely on biodiversity and what can be done to improve these relations.

For this, we examined six sectors in more depth. Companies in food, recreational, health care and construction sectors are more directly depended on nature than the financial sector and business parks. These sectors rely on raw materials taken from the nature, biological products as their major source. For example, recreational value is important for tourism sector and for the green experiences. Food sector and healthcare sectors are directly depended on nature as being a provisioning service; extracting non timber forest products, like mushrooms and fruits, also animal products like meat from large herbivores, plants for making the medications. Also, they can create an extra income for nature areas. On the other hand, indirect dependency can occur. For instance, nature can play a restorative role in the healthcare sector. The construction sector is so large that it involves a lot of actors and stakeholders that have an indirect relation with the nature. A business park is a cluster of different companies at one place, that is why it depends less on nature. The financial sector has the smallest linkage with nature as it comprises only financial institutions like banks, real estates and insurance companies.

Overall, we can conclude that if companies want to exist in the future, it is a good start to think and act in a sustainable way. Business today, as well as all of the society pays more attention to the state of the environment. More environmentally friendly products are appearing on the market trying to inflict as little harm to the environment as possible. Businesses are gradually getting aware of the environmental risks, but the situation is not optimal yet, a lot has to be done. What matters is that such actions are not just a disposable, but long-term partnership and can be established to best take care of nature.

5. Survey on dependencies between business sectors and nature and landscape

Based on the previous theoretical research and identification of stakeholders a survey was developed to find out the awareness of business enterprises in Twente of their mutual dependence on nature and landscape as well as possible ways of involvement in partnerships towards nature and landscape development and conservation. The survey (as included in Annex I) was sent out to approximately 600 recipients from different business sectors in the region with a reminder and data collected within the period of 2 weeks. The received response rate is 5.66% (34 replies, 26 completed).

Although the survey was accompanied by an explanatory letter of the project and the research done, several companies responded to our e-mails by indicating the lack of relevance for their enterprises, lack of time or mistaken identification of belonging to Twente. The reasons mentioned by companies with additional limitations of time and season (beginning of summer vacations) explains the low response rate of the survey. Therefore the results of the survey presented and explained below are to be an indication of trends within the business sectors and not fully representative results.

5.1 The population of the respondents

The survey has been sent out to organizations and business enterprises in following sectors: logistics, construction, waste and energy, food production, recreation and leisure, business parks and networks, finance, health care, industry and wholesale. The respondents (n=34) represent large industrial parks (5; 15%), small industrial parks (6; 18%), separate business territories (6; 18%), businesses situated in the cities (9; 26%), in villages (7; 20%) and one respondent has indicated its location as recreation area. The represented business sectors (n=26) are shown in Figure 5.1.

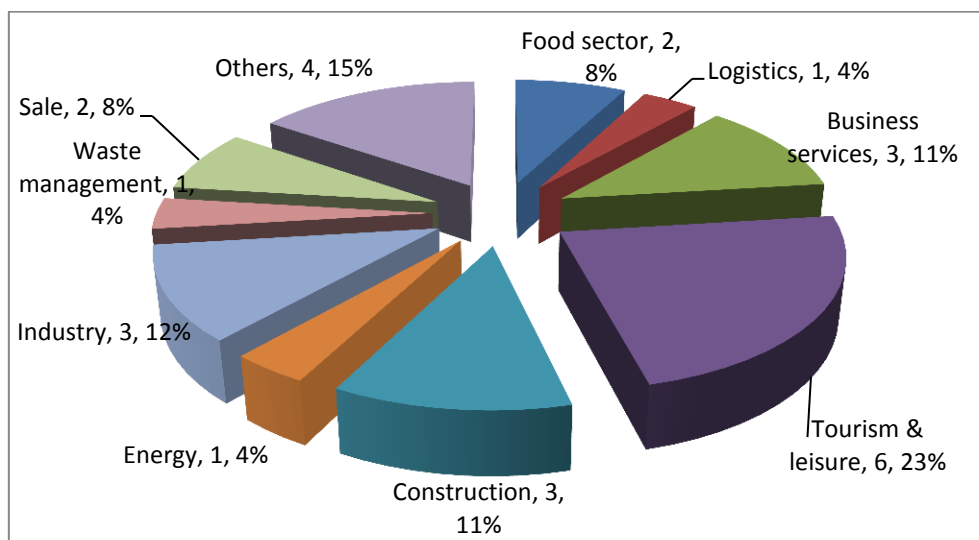


Figure 5.1: Represented business sectors

Other sectors (indicated by respondents) are agriculture-recreation, greenhouse, governmental sector, town spatial planning consultancy. The sector of healthcare is not represented at this survey result analysis as there has not been any response rate from it.

The scope of the responded enterprises: 72% located locally in the region of Twente as well as 10.5% regional, 10.5% national and 7% international companies with office in Twente. The market area for

the companies: 16% local, 13% regional, 42% national and 29% international. Therefore we can assume by these results, that 72% of respondents have a direct connection with the region.

The size of the responded businesses (n=26) by the number of employees and annual turnover¹ is shown in Figure 5.2.

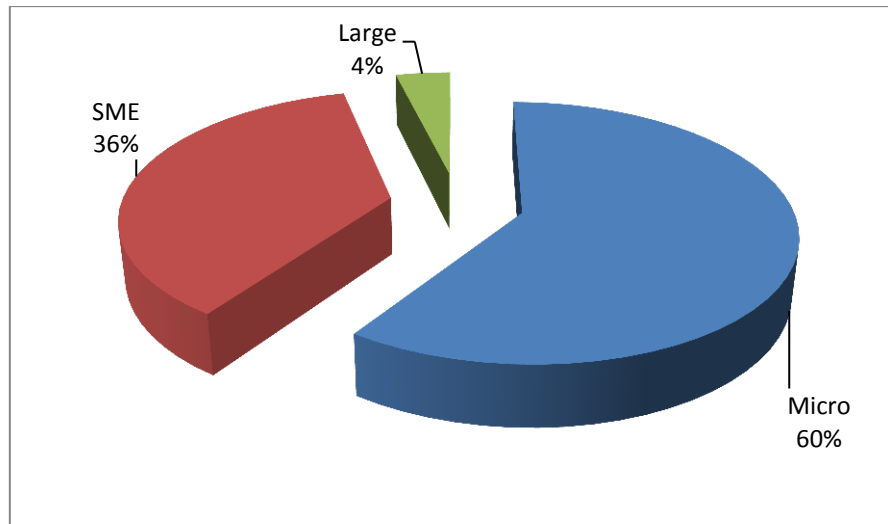


Figure 5.2: The division of respondents per enterprise size

The survey respondents represent a wide range of business sectors in the region of Twente as well as demonstrate the dominance of micro and small- and medium-sized enterprises (SME) in the region.

5.2 Business relation to nature – self evaluation

The result from the second question, about rating the attractiveness of the region (n=34), show the business and economic development to be the most important. This aspect is followed by infrastructure. The third most important aspect is land price. Landscape is at the fourth position and nature at the sixth.

Analysing the results per business sector (Figure 5.3) regarding valuing nature and landscape it is visible that nature is of importance (rate above 5) for such sectors as energy, tourism and food production. Whereas landscape is an important aspect (rate above 5) for waste management, construction sector, business services, tourism and food production.

¹ The main factors determining the size of company: micro (employees <10; turnover ≤ € 2m); small (employees < 50; turnover ≤ € 10m); medium-sized (employees <250; turnover ≤ € 50m) (European Commission, 2012)

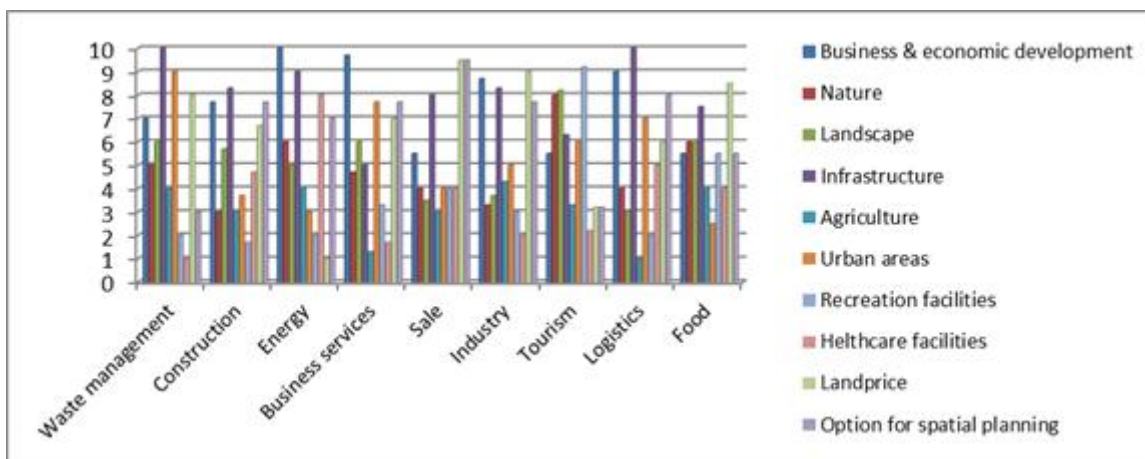


Figure 5.3: Rating of the attractiveness of the region per business sector (1 – least important, 10 – most important)

This question does indicate a mind-set of the economic drivers of the region showing that if the economy is going well and is good organized, there is a care also for the nature and landscape. As well as the most appreciation of nature and landscape come from the business sectors which have a more direct dependency on the environmental services.

The third question was focused on the importance of the different elements of nature and landscape by the enterprises in Twente (Figure 5.4). As the most important aspect has been indicated **the enjoyment** (5.3 points out of scale of 7) followed by **recreation value** (4.9 points) and **landscape of Twente** (4.8 points). These results present a mind shift from a classical approach to nature and landscape as biodiversity to a demand for nature as a source of recreation and enjoyment. By these results we can assume that business people not always have the high knowledge and understanding of the terms and relevance of a high biodiversity or geological values, but they have an appreciation towards more simple terms (like, forest & heath, recreation and enjoyment). Therefore we see a possibility for Landscape Overijssel to consider the language used once approaching the business enterprises for cooperation projects.

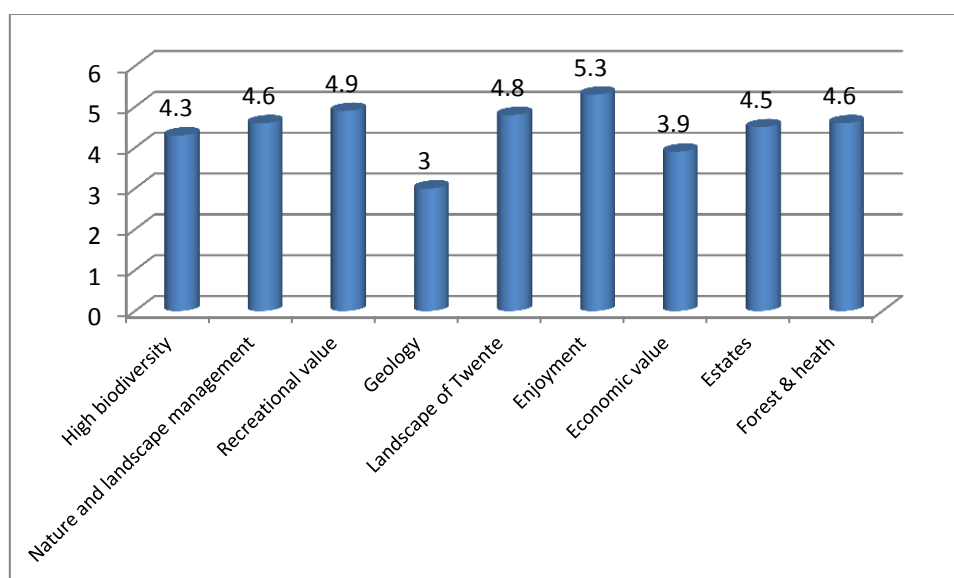


Figure 5.4: Rating of importance of elements of nature and landscape by the businesses in Twente (used scale 1 to 7 where 1 is 'unimportant' and 7 is 'highly important')

Also the results of the question three analysed per business sector (Figure 5.5) show a relationship between an appreciation of different elements of nature and landscape and the business sectors with a more direct reliance on environmental services.

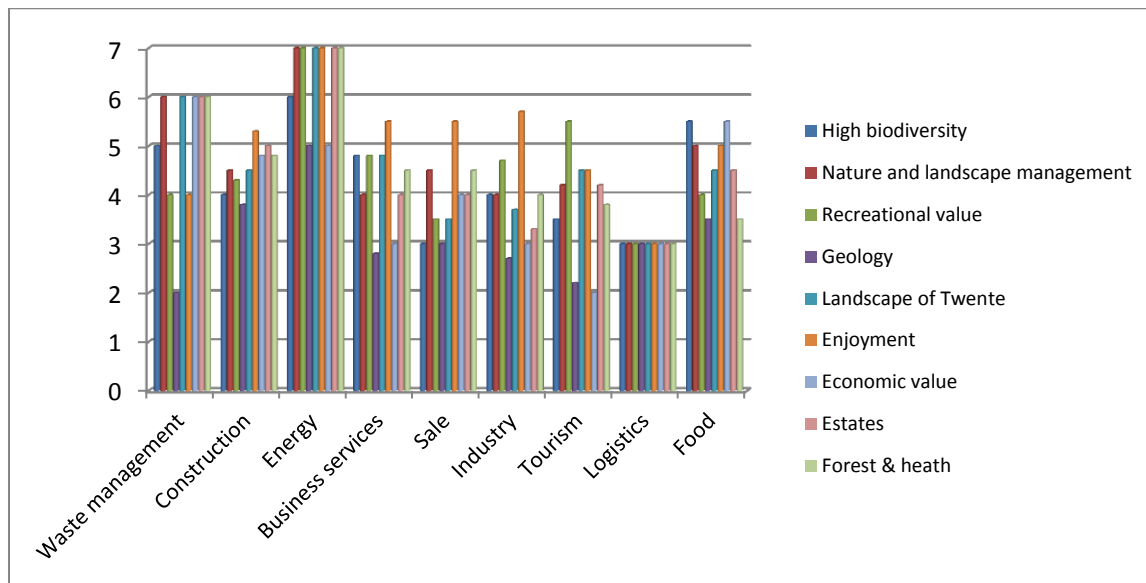


Figure 5.5: Rating of importance of elements of nature and landscape per business sector in Twente (used scale 1 to 7 where 1 is 'unimportant' and 7 is 'highly important')

For the fourth question and proposed statements (n=34):

- My company has direct benefits from the surrounding nature and landscape in Twente (raw materials, products, health ect.) – **the average score is between 'somewhat disagree' and 'neither agree nor disagree'**;
- My company has indirect benefits from the surrounding nature and landscape in Twente (water purification, soil fertility ect.) – **the average score is 'neither agree nor disagree'**;
- My company has a direct negative impact on the surrounding nature and landscape in Twente (CO₂ emissions, waste, mining resources, ect.) - **the average score is 'strongly disagree'**;
- My company has an indirect negative impact on the surrounding nature and landscape in Twente (like the use of uncertified wood in production, paper or otherwise) – **the average score is 'strongly disagree'**:

In general businesses disagree with either positive or negative impacts and dependencies on nature and landscape (Figure 5.6). By the responses of the business representatives we see recognition of a slight connection by the sectors with direct reliance on nature towards benefits, but almost no recognition of how enterprise's functioning impact negatively the surrounding (and not only) nature and landscape. Therefore, we see a need of continues awareness raising taking into account the results described above, using case specific, business like language to help to understand the issues, dependencies and possible solutions.

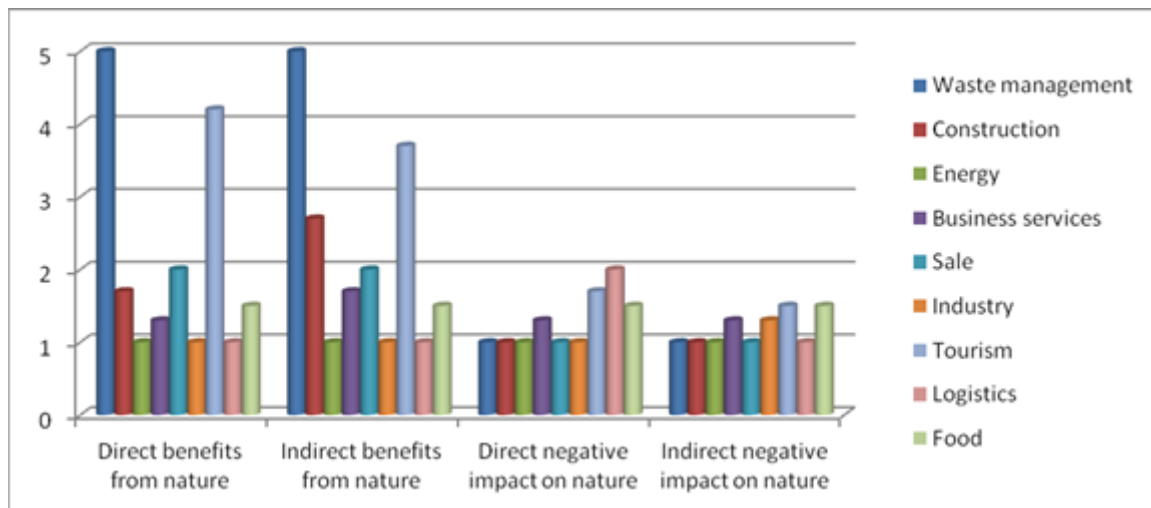


Figure 5.6: Results of question 4, rating of profit from nature and impact on nature per business sector (scale 1 to 5 where 1 is 'strongly disagree' and 5 is 'strongly agree')

For the fifth question - the statements about the responsibility of nature and landscape management:

- Do you think that care for nature and landscape development is only the responsibility of the government? – **average rate: disagree**
- Do you think business enterprises must contribute to the management of nature and landscape? – **average rate: more agree than disagree**
- Do you think several companies should jointly contribute to the management of the nature and landscape? – **average rate: more agree than disagree**
- Do you think government and businesses should work together to contribute to the conservation and development of nature and landscape? – **average rate: agree**

In general respondents of the survey agree that the responsibility for nature and landscape management goes shared to the government (local and national) and private businesses. As well as mostly business representatives do admit the need to contribute to the management of nature and landscape. Therefore we see need for the development of an action plan - concrete and case specific to maximize a positive outcome of projects towards nature and landscape development using the general openness to the issue.

Several questions were formulated to explore the existing and potential connections between businesses and investment in nature and landscape – (n=34):

- **Q6:** My company influences the regional environment in Twente. **(it does – 41%; does not – 59 %)**. If yes, how? – providing information (museum), spatial design (architect and planning consultancy), providing recreational services, agricultural management.
- **Q7:** My company currently contributes financially to conservation of nature and landscape in Twente. **(It does – 15%; does not – 85%)**. If yes, how? – through taxation system, planning and encouraging local projects.
- **Q8:** My company currently contributes physically to conservation of nature and landscape in Twente. **(It does – 32%; does not – 68%)**. If yes, how? – agriculture management, waste recycling, planning.

- **Q9:** My company has the potential to contribute financially to the conservation and development of nature and landscape in Twente. **(It would – 26%; would not – 74%)**. If yes, how? – subsidies, through ITP Food Cluster, granting local initiatives.
- **Q10:** My company has the potential to contribute physically to the conservation and development of nature and landscape in Twente. **(it would – 47%; would not 53%)**. If yes, how? – through local cooperation partnerships to exchange knowledge and experience, use of facilities or production and agricultural projects.
- **Q11:** Nature and landscape contributes currently to my company. **(it does – 26%, does not – 74%)**. If yes, how? – through attracting tourists and agricultural lands.
- **Q12:** Nature and landscape could potentially contribute to my company in future. **(It could – 32%, could not – 68%)**. If yes, how? – through established partnerships, nature education initiatives, letting nature be managed by agricultural nature associations, through balanced coordination between landscape, urban areas and built environment.

The set of these questions slightly contradict the results presented above indicating the awareness and willingness to contribute to the nature and landscape development in shared partnership between public and private sectors. Nevertheless an important outcome here is a preference for physical contribution (practical projects with direct involvement of the company by its employees or core business activities) in comparison to financial support (without direct involvement). As well as the responses to these questions (Q6, 11 and 12) confirms the lack of awareness of mutual dependencies between the business sectors and nature and landscape.

When seen per business sector (Figure 5.7) the results show that primary waste management and the energy sector are most aware of mutual dependencies as well as are either involved in current or consider potential contributions to nature and landscape development.

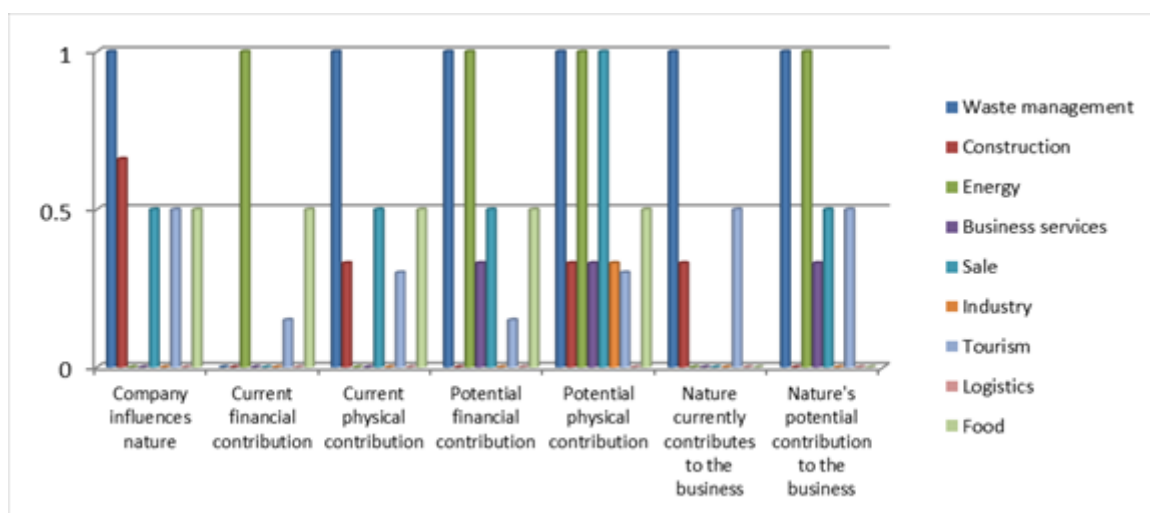


Figure 5.7: Results of questions 10 to 12 per business sector (scale 0 'no', 1 – 'yes').

5.3 Win-Win solutions

The likeliness of companies to participate in conservation and development of nature and landscape in Twente (Q14): **the average score is just above 'maybe'** (4.2 in the scale of 1 to 7; n=26). In addition a question of "If very likely or highly likely, then why?" was asked:

- We already often participate in such kind of projects;

- We are active in agricultural nature management;
- Sustainability and landscape development is our core business;
- Active participation in the IPT Food Cluster².

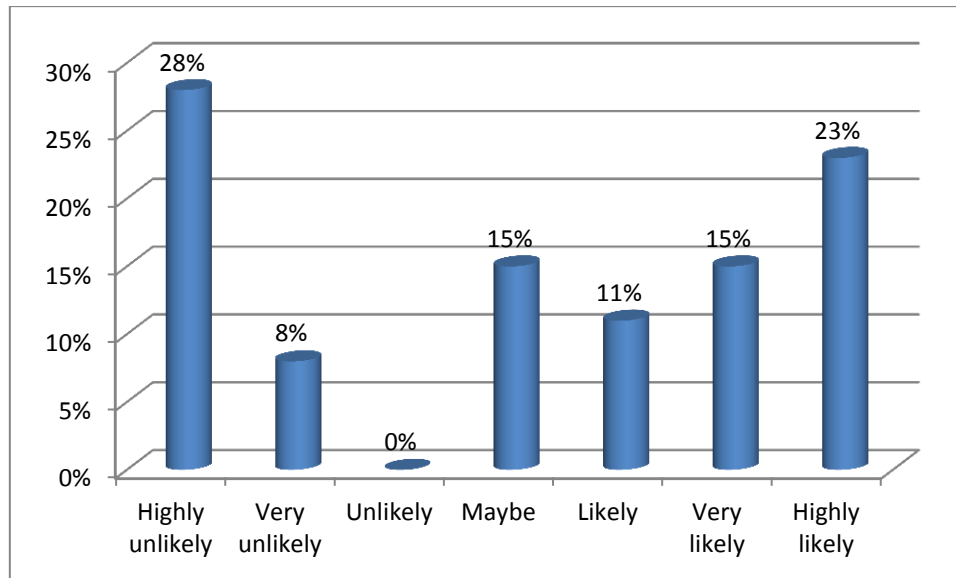


Figure 5.8: Likelihood of participation in partnerships and projects towards nature conservation and development in Twente.

The division of replies do not represent a normal distribution and are concentrated at the extreme ends of the scale. About half of the respondents either have no interest in participation or are currently already involved in or perceive themselves very open for possible partnerships. There could be an assumption developed in case of this question about existing stereotypes about what nature is and what business perceives to be typical nature development projects as there is an internationally known gap in communication and cooperation between nature development initiatives and the business world. These kind of stereotypes would form a need for a shift in public standpoint of nature development initiatives (like Landscape Overijssel) to talk more simple language to the general public in order to achieve their goals. Nevertheless to draw more concrete results, more detail research on this topic is required.

When results seen per business sector (Figure 5.9) the set of business sectors with more direct dependency on nature and landscape (waste management, construction and energy sectors, sales (wholesale and retail) and food industry) indicate the highest willingness also to participate in conservation and development of nature and landscape. The tourism and leisure sector has an indication of rather low willingness (rate 3.5 out of 7) which could be explained by the scale of enterprises and seasonality of the business sector for involvement in long term projects.

² Food cluster of Twente Innovation platform (Foodcluster van het Innovatieplatform Twente) (Stichting InnoFood, 2011)

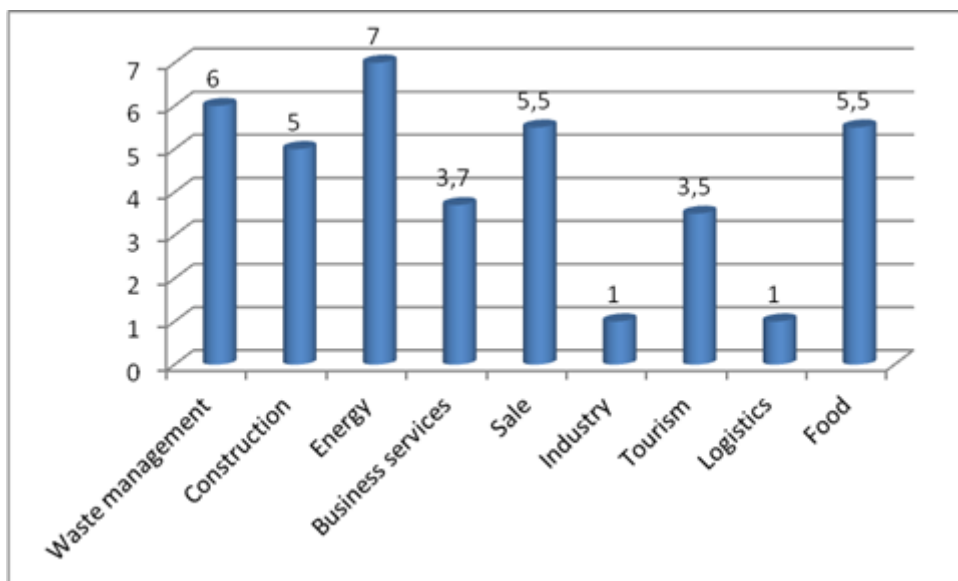


Figure 5.9: Likelihood of participation in partnerships and projects towards nature conservation and development per business sector in Twente (scale 1 to 7, where 1 is 'highly unlikely' and 7 is 'highly likely').

When asked to rate different possible cooperation projects (Q15), **the highest interest** has been showed for:

- Project to increase the natural attractiveness and beauty of nature and landscape in Twente;
- Enhancing the attractiveness of the living environment in Twente;
- Enhancing the attractiveness of the environment close by the enterprise.

As the least attractive projects have been indicated:

- Philanthropy and donations;
- Area-account;
- Voucher for a piece of nature and landscape auction.

The negative rating of the projects could be explained as not sufficient explanation was provided to really introduce the idea of the concepts to businesses. Therefore it was limiting to see clear benefits for the possibly involved parties. When results seen per business sector (Figure 5.10), the waste management sector has the greatest interest in several projects (6 out of 8 projects). Also such sectors as construction, energy, business services, sales, tourism and food industry show interest in some of the projects offered. Interestingly is that more general approach projects, like enhancing nature and landscape, but focused on direct surrounding, have higher rates, therefore these results relate with the results described and analysed above - from the respondents are 72% located locally in Twente only and want more physical, concrete projects with direct involvement. These outcomes are very relevant to Landscape Overijssel in developing action plans after the end of this project to establish local partnerships with different business sectors.

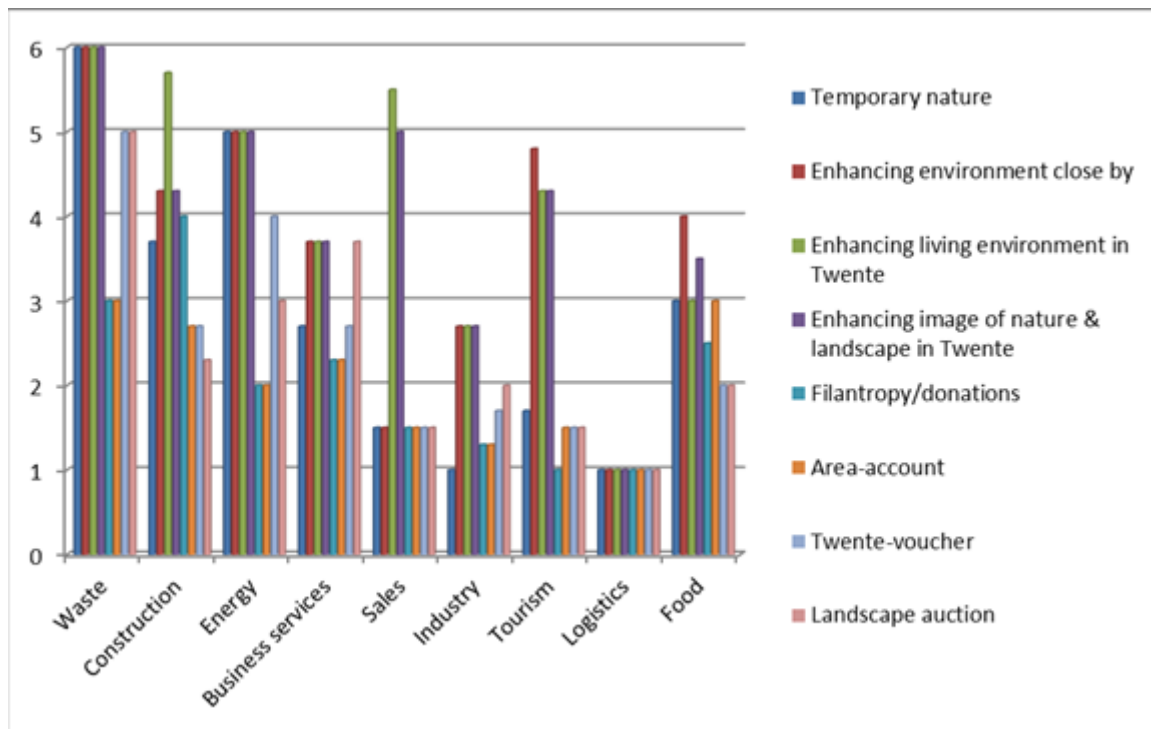


Figure 5.10: Rating of the possible cooperation projects per business sector (scale 1 to 7, where 1 is 'no interest' and 7 is 'high interest')

5.4 Environmental services

The survey included part on evaluation of the extent the businesses make of use of the environmental services (Q13). The environmental services have been divided in 4 sections:

- Provisioning services (goods or products obtained from ecosystems) represented in a Figure 5.11;

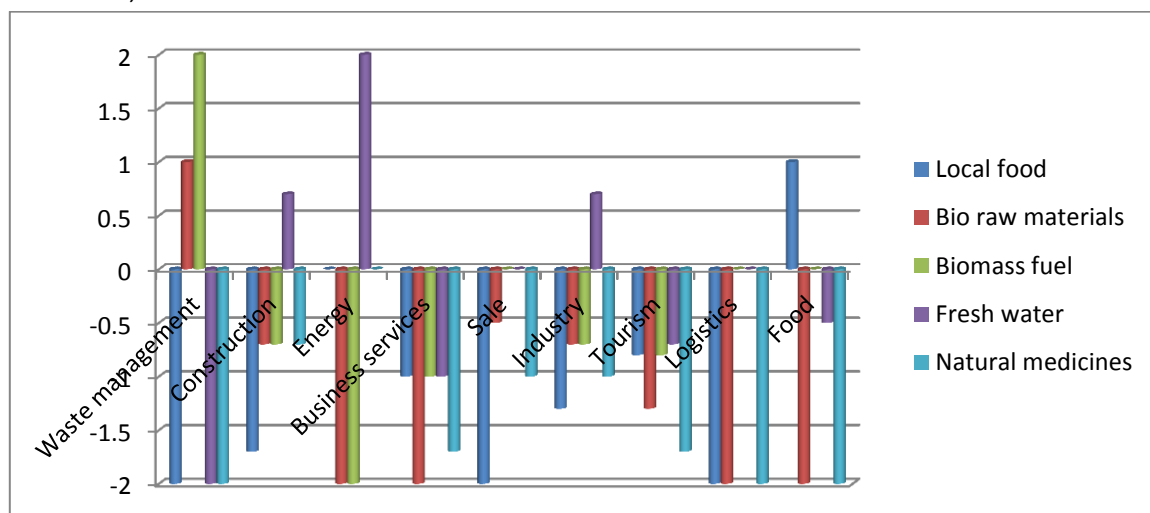


Figure 5.11: Use of provisioning services by business sectors in Twente (scale -2 ('never') to +2 ('always'))

- Regulating services (the benefits obtained from an ecosystem's control of natural processes) represented in a Figure 5.12;

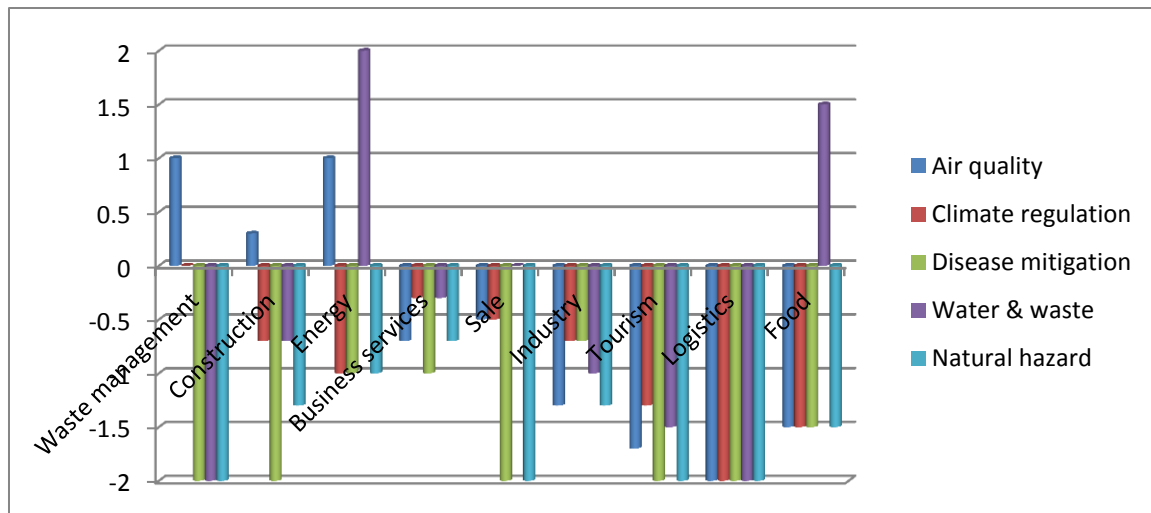


Figure 5.12: Use of regulating services by business sectors in Twente (scale -2 ('never') to +2 ('always'))

- Cultural services (the nonmaterial benefits obtained from ecosystems) represented in a Figure 5.13;

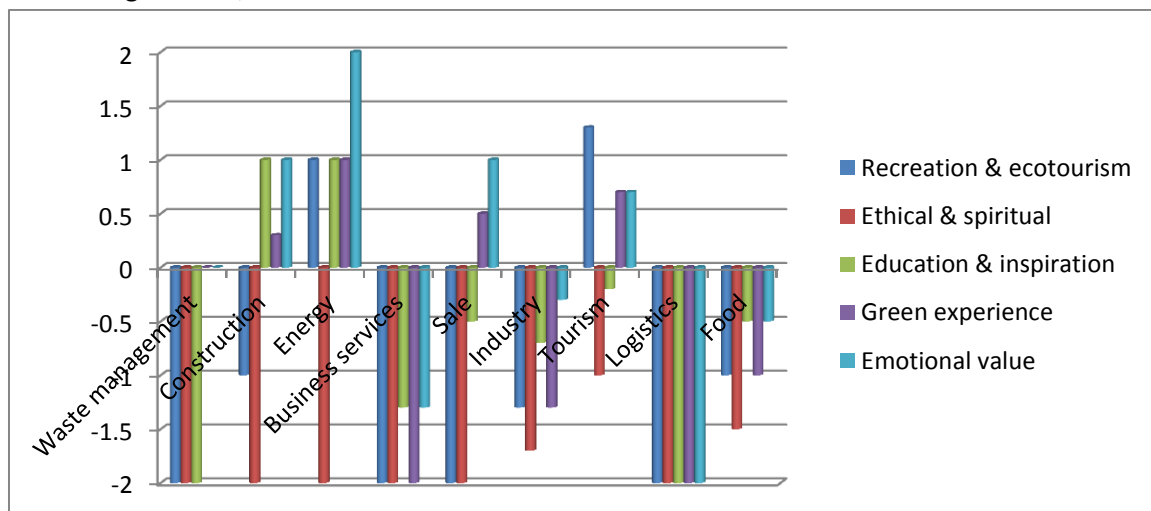


Figure 5.13: Use of cultural services by business sectors in Twente (scale -2 ('never') to +2 ('always'))

- Supporting services (the natural processes that maintain the other ecosystem services) represented in a Figure 5.14.

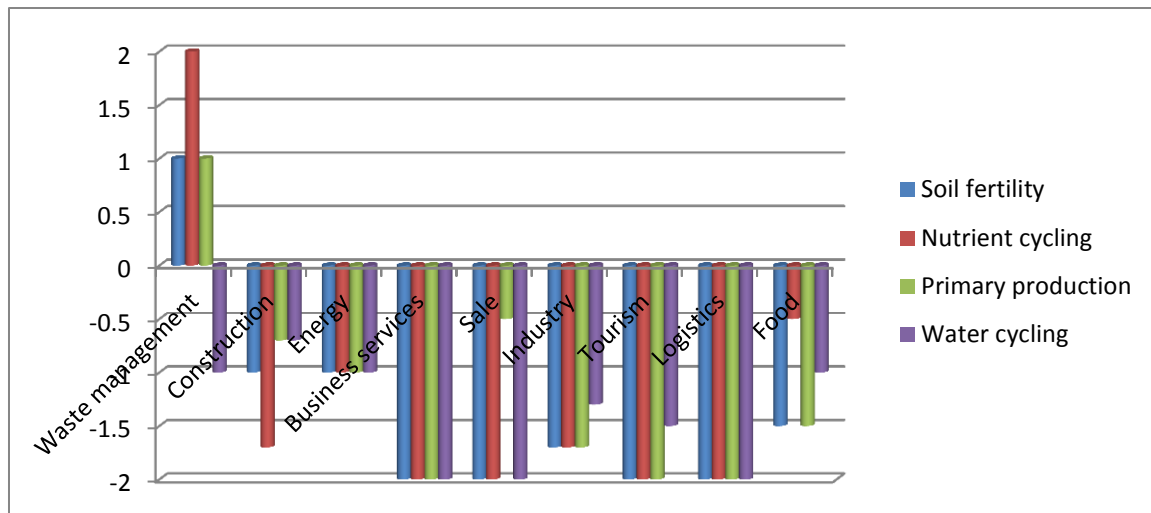


Figure 5.14: Use of supporting services by business sectors in Twente (scale -2 ('never') to +2 ('always'))

When comparing the figures above (5.11 to 5.14) we can see the highest recognition of cultural services between the business sectors. The 'popularity' of cultural services might once again be explained by recognition of the terms describing the services by the general public rather than environmental professionals and do support our conclusion done earlier in this chapter, that there is a gap in communication between environmental organizations and business sector in the way the issues are presented and explained.

When results seen per business sector we have connected them with the theoretical research of mutual dependencies described in an earlier chapter of this report.

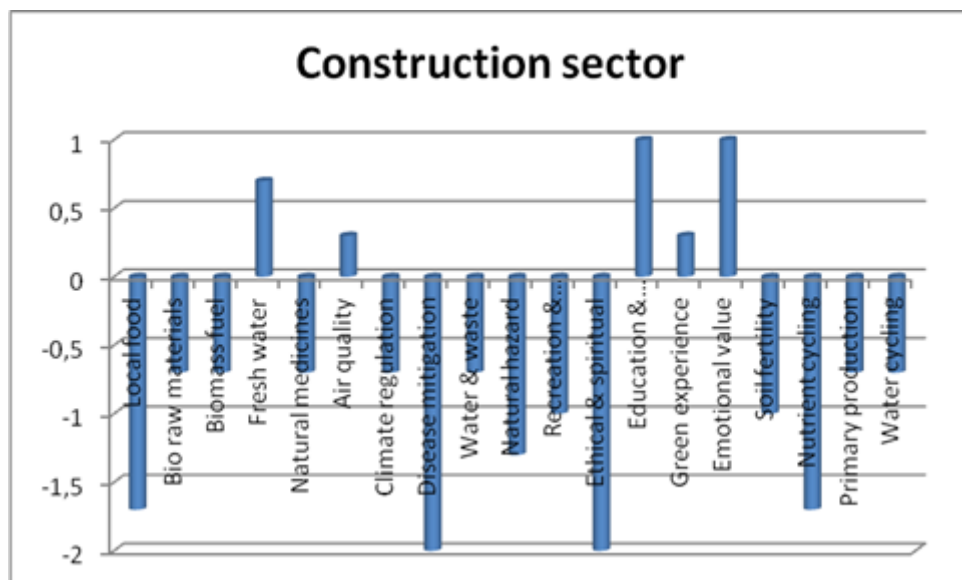


Figure 5.15: Use of environmental services by construction sector in Twente (scale -2 ('never') to +2 ('always'))

As described in the theoretical overview (Table 4.2) the construction sector is highly dependent on all four groups of environmental services - provisioning services as food, water, raw materials (like timber); regulating services as air quality, climate regulation, water purification and waste treatment; cultural services as health and comfort; and supporting services as water cycling. Once comparing the

actual awareness indicated (Figure 5.15) by the results of the survey we can observe that the respondents of construction sector are weakly aware of their mutual dependencies with nature and the environment and recognize only the use of fresh water, air quality and cultural services. We do recognize here a great challenge of awareness rising to help the sector to understand that 'green' is more than just good business practice and help to identify the aspects of importance of nature and landscape to the construction sector.

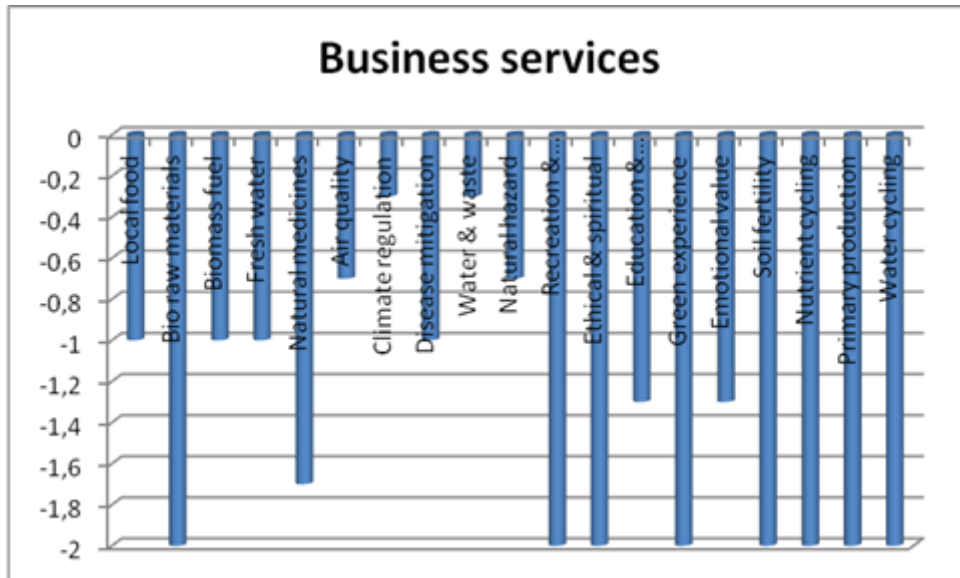


Figure 5.16: Use of environmental services by business service sector in Twente (scale -2 ('never') to +2 ('always'))

The business service sector has no direct dependence, but a strong impact through investments & partnerships. Other sectors which do have a more direct connection (impact or reliance) with nature and landscape in that was improving their own CSR. To draw more specific conclusions from the survey results (Figure 5.16,) more in-depth research would be needed to measure the awareness of the business service enterprises towards for example Equator Principles or other certification schemes therefore representing their understanding of indirect dependencies with nature and landscape. As for now the results do not indicate even awareness of usage of food and fresh water which might indicate a misleading interpretation of the survey question.

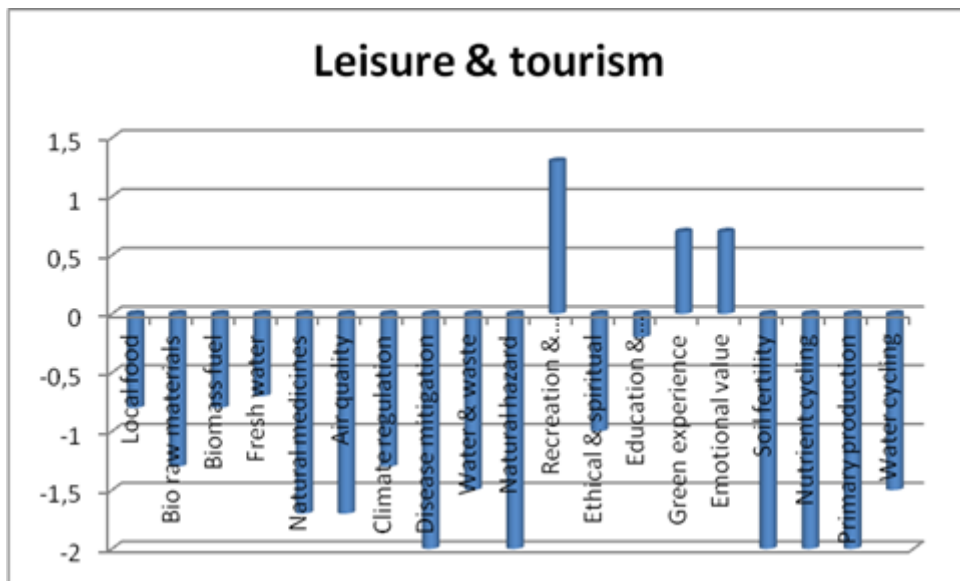


Figure 5.17: Use of environmental services by leisure & tourism sector in Twente (scale -2 ('never') to +2 ('always'))

As described in the theoretical overview (chapter 4.5) the most direct dependency of the recreational sector on nature and landscape is through cultural environmental services, like recreation and tourism, education, emotional values, green experiences. Nevertheless analysing the survey outcome (Figure 5.17) we see enterprises of the recreational sector not being aware of their other direct dependencies like food and water, air quality, climate regulation, natural hazard mitigation and water cycling without which the industry could suffer great economic losses as it is more than others very seasonal and location specific. More awareness raising is also needed in this business sector.

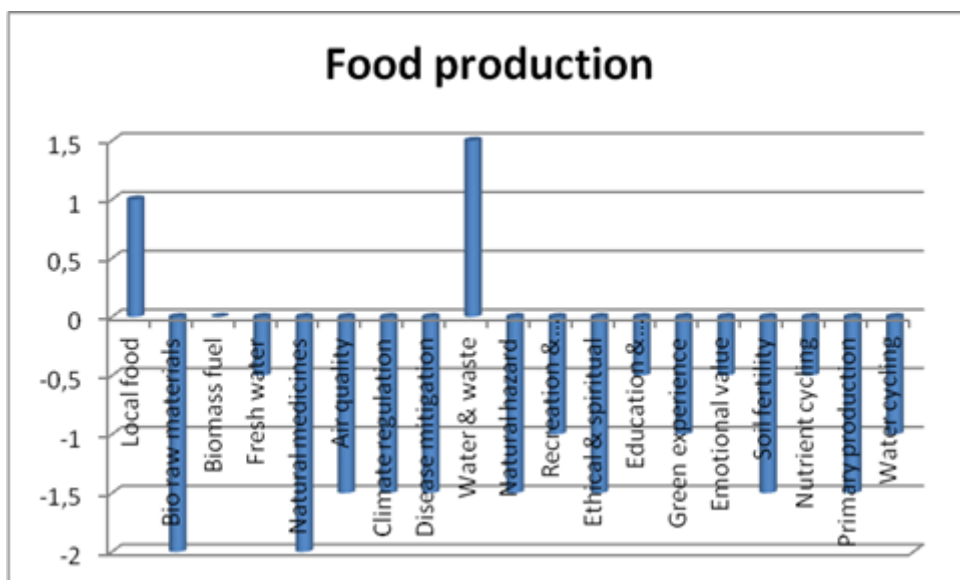


Figure 5.18: Use of environmental services by food production sector in Twente (scale -2 ('never') to +2 ('always'))

Food production has both direct and indirect dependencies on nature and landscape. The sector relies directly through provisioning services like local food, fresh water raw materials as ingredients of food. The other three types of environmental services form more indirect dependencies as water purification and waste treatment or nutrient cycling through different actors within the supply chain.

As can be observed in Figure 5.18 the results of the survey indicate only slight awareness of two out of nineteen proposed environmental services. To find out more a detailed and representative indication of the actual situation within the business sector would require further research, but similarly as other sectors this indicates the lack of awareness of mutual reliance between the business sector and nature and landscape.

5.5 Summary

Although the survey respondents represent a wide range of business sectors in region of Twente and demonstrate the dominance of micro and small- and medium-sized enterprises (SME) in the region the results are not fully representative due to the low response rate.

Overall survey results indicate a low awareness of business direct and indirect dependencies with nature and landscape. Meanwhile business representatives do admit a need of mutual involvement of public and private sectors towards the management of nature and landscape therefore indicating an understanding of the issue. Thus awareness raising needs to be addressed to help business sectors (and individual enterprises) to recognize their individual and case specific relation with nature and landscape and the importance of direct local actions.

Other important outcome of this survey is the indication of the communication gap, meaning the language used to describe nature related issues, between nature specialists and business sectors. Whereas biologists talk about high biodiversity, the business sectors appreciate enjoyment and recreational value of nature. Therefore a need for adopting different terminology by nature development organizations (like Landscap Overijssel) to achieve their goals has been recognized.

6. Interviews businesses

To enable a more in-depth analysis of the connections between nature and businesses in different sectors interviews were arranged with several companies. The focus of the interviews was on how businesses valued nature, on the dependencies between business and nature, and about the current and potential contribution to nature. It was asked specifically for the situation in the company itself, but it was also tried to extend it to other companies in the same sector, or in the near environment. A SWOT analysis is done on the results, which is described in this chapter. In this analysis an evaluation took place of the discussions with the interviewees. The strengths, weaknesses, opportunities and threats in current or possible connections of business with nature and landscape were filtered out. In this chapter a short description of the companies is given, as well as a detailed and summarized description of the SWOT analysis. As a last, the key points of an interview with one of Twente's municipalities is described.

6.1 Companies

It was tried to arrange interviews with companies in five different business sectors, namely the industry, construction, energy and waste sector, and also business parks and municipalities. In the end, the interviews were conducted with four companies in two different sectors, namely the energy and waste sector and industry. Details about the companies and interviewees can be found in Table 6.1.

Table 6.1.: Details of interviewed companies

Company	Activities	Size (# employees)	Contact person function
<i>Twence B.V. - Hengelo</i>	Waste management company, waste is turned into resources, building materials or energy	Circa 200	Expert green areas
<i>BioForte B.V. - Enschede</i>	Development, distribution and maintenance of biomass installations	3-4	Director
<i>Akzo Nobel Chemicals B.V. - Hengelo</i>	Production of salt, salt specialties and energy	Circa 400	Advisor Communication
<i>Eaton Industries B.V. - Hengelo</i>	Development and distribution of low and medium voltage products	600-700	Operational Excellence Manager

6.2 Strengths

All companies are aware of their impact on the environment and the position they have in society in working on sustainability. All three Twence, Eaton and Akzo Nobel say that reducing the impact on the environment is a very important issue, and within the company knowledge on this has been developed. The key point for Akzo Nobel is that what will happen in the soil will not affect the environment. The company has a continues search for new mining grounds, but the impact on the environment is also taken into account. Beside that they aim to maintain the green on formerly exploited areas or in the near environment. Twence mentions the awareness of operating in a vulnerable area. The region is working on CO₂ reduction and the contribution of Twence in reaching the goals is 60%, and the company delivers green energy in the region. Also Twence is working directly on a green environment via investments, land purchases for nature development and cooperation with other companies and organisations. The reduction of energy consumption is an important goal for Eaton Industries via the development of an optimal and sustainable use of energy.

Furthermore, because of the international character of Eaton, the impact on local as well as the global level is considered.

CSR and sustainability programs are important elements, and becoming more common in large companies. Within this, Akzo Nobel and Eaton have also community program inside the company to stimulate employees to contribute to both their living and working environment.

Another strength of large businesses is their capital; relatively large amounts of money are available for investments in nature, because of the size of the business as well as their policy. Investments in nature contribute to a better reputation of the company, via for example creating goodwill in the neighbourhood, enlarging the public support or using it as a marketing tool. Therefore, businesses always have interest in participating in nature-related projects, and have money available for it. Collaboration with other companies or organizations is enabled as well. Eaton Industries cooperates with other companies of the industrial park in a biogas initiative. Another example of a larger scale cooperation with another company is the pipeline connection between Twence and Akzo Nobel. Hot steam is transported from the power station to Akzo Nobel. In this way, the installations could be optimized and less gas is respectively wasted and used in the production process. And there are more cooperation projects with other companies in this business area. Twence puts a great effort in communication with other companies, organizations and other shareholders, via several consultation meetings per year. They also try to reach the local people living in the near environment via focus groups, excursions in the factory, education and open days.

For small companies the local character can be a strength, as for example for Bio Forte, who say to 'support the local community, because we strive for local resources that go to local customers'. Bio Forte is very small compared to Twence, so whereas Twence is looking for large inputs, Bio Forte needs small amounts per year. This enables a local to local philosophy, in which they have local possibilities.

6.3 Weaknesses

A first weakness is that all companies had a certain impact on the environment via the release of waste water, CO₂ emissions, noise or smell. However, they all mentioned to be aware of this. A related weakness is the continues expansion of industrial activities which are threatening for nature. Akzo Nobel for example, is constantly looking for new mining grounds. However, this also creates chances for linkages because just beside expansion, a company can invest in nature as compensation. Small companies can face the problem of having the will but not the capital to invest in nature. As a last, the priority of the companies is not at the regional landscape, but only the landscape within the territory of the company or next to it.

6.4 Opportunities

A shared thought is that taking care of nature is not only the responsibility of the government, but that business also needs to contribute. Businesses become also more and more aware of its benefits for them as a company. Goodwill and support can be created among neighbours as well as municipalities and other stakeholders. An increased acceptance of the company's presence and activities lead to for example a shorter permit procedure. And with time, also money has been saved. Furthermore, the character of a business or industrial area and the near environment is also important for the individual businesses, it can influence customers or clients positively. Eaton mentions that customers even expect the company to invest in e.g. nature or sustainability programs. The management of businesses become more and more aware of the benefits of

investments in the environment, and the relevance of a good relationship with the neighbourhood, but this awareness still can be increased.

Chances are created for participation in projects if a company thinks and operates in this way. Akzo Nobel agrees to have interest in nature-related projects, and that there is also money available. Often companies do not have ideas about what to do in practice, but are willing to participate in external initiatives. So here lie large opportunities for nature organizations as Landscape Overijssel to initiate regional projects. Furthermore, there are opportunities in extending the existing collaboration projects between different companies, as mentioned in section 6.2. For a small, local operating company like Bio Forte, the distance to locality is small, which enhances the communication with people in the near environment and creates opportunities to bring nature closer to locality.

Privatization has also enhanced the possibilities of a company, like Twence, to invest in nature, because the political influence has been reduced, as well as time consuming considerations. On the other hand, communication with governmental organizations is still important. Twence, Akzo Nobel and some municipalities are in close contact about for example the spatial planning of the near environment.

For the energy and waste sector an upcoming concept is the processing of biomass. Bio Forte has already a partnership with one of their shareholders in Twente. Biomass from an estate are provided for Bio Forte which process it further into new energy. This relationship can also be established with a nature organization like Landscape Overijssel. Bio Forte has the knowledge on the requirements of useful biomass, while Landscape Overijssel can sell their residual biomass from their terrains to the company. It is important to find a balance between demand of Bio Forte and the capacity to fulfil this. The amount and price of biomass may not fluctuate too much, because Bio Forte needs a guaranteed certainty. The cooperation also needs to be feasible financially. A long term cooperation of for example 15 years could create this certainty and feasibility, within a local collaboration with local suppliers.

Also Twence recognized possibilities in processing biomass from garden- or landscape wastes, provided by municipalities or nature organizations, together with the development of new techniques. There are more future possibilities of transforming waste into new energy, like the fermentation of manure. A company like Twence has knowledge and always searches for sustainable solutions. Twence is also working on a (not yet commercial) bio-energy park, in which Twence provides the energy and infrastructure for small companies so they can test new techniques.

Twence actively purchases land in the region which can be used for nature development, the latter in cooperation with e.g. the Water Board or nature organizations. For larger companies both a nature voucher and landscape auction, and the area-account are interesting ideas when looking at a more indirect way of investing. The combination of funding and a place for team building is also attractive, for example in a botanical garden. Also Bio Forte agrees that concepts like a voucher or area-account are nice ambitions, but for Bio Forte an initiative that comes from the local community would have much more value, or with a large public support or license.

All companies are looking in one way or another for profitable ways of investing in nature, also on the regional scale. This is also a challenge for nature organizations. Companies do invest in nature, but it should go further than just financially. Nature organizations are more famous for asking for money, while companies would like to be informed and involved in projects initiated by nature

organizations. An active approach of companies, about concrete initiatives will increase the attractiveness of participating and it could also increase the willingness of less interested businesses.

6.5 Threats

Investments in nature are important for businesses, however, only to a limited extend. If the economy drops, or when the financial situation of the company is decreasing, nature is not the most essential element. Investments need to have clear social benefits and be valuable on both short and long-term, but still do not have a high priority. In the case of biomass provision, it is very important that certainty can be guaranteed. The amount of biomass that can be delivered needs to be stable, because this is connected to the price of biomass. If fluctuations are small, long term costs and prices can be calculated for clients, which creates certainty.

Another threat lies in the current role of nature organizations. Until now, they have often asked for money or funding of nature, but this is not what business wants. They want to see initiatives of projects, so that they can participate actively (see section 6.4), but there is still a lack of effort in this. For some companies that work on a local scale, like Bio Forte, it can be very important that the initiative is local, that it comes from the local community, which can be even more restricting. For large companies, like Twence, the cooperation with municipalities can be difficult. Although the communication is good, municipalities are not always satisfied with the presence of a company. Issues like impact on the environment, or not providing much work for the local community can hinder a good cooperation. Furthermore, governmental regulations can be a bottleneck for investments or contributions to nature. The goal or vision can be in accordance with that from e.g. municipalities, but regulations or permits can restrict companies in the implementation of plans.

6.6 SWOT analysis - a summary

Connections between business and nature in Twente		
	Positive	Negative
Internal	<p>Overall</p> <ul style="list-style-type: none"> - Awareness of impact and position - Investments in sustainability - CSR - Knowledge <p>Large companies</p> <ul style="list-style-type: none"> - Availability of money - Investments in nature development - Partnerships or cooperation with other companies or shareholders - Green compensation - Nature-community program for employees - Contribution to "CO₂ reduction targets" - Willingness/openness to new ideas/projects <p>Small companies</p> <ul style="list-style-type: none"> - Local to local 	<p>Overall</p> <ul style="list-style-type: none"> - Impact on environment <p>Large companies</p> <ul style="list-style-type: none"> - Expansion of activities (scale and intensity) - Looking for large inputs, less local - Own terrains have priority, not the regional landscape <p>Small companies</p> <ul style="list-style-type: none"> - No capital to invest <p>Others</p> <ul style="list-style-type: none"> - Logistic sector has large impact on environment, but no awareness

External	<p>Overall</p> <ul style="list-style-type: none"> - Nature as responsibility of both government and companies - Acceptation/goodwill/support from neighbourhood and municipality - Partnerships or cooperation with other companies or shareholders - Customers expect effort for sustainability - Initiatives from nature organizations <p>Large companies</p> <ul style="list-style-type: none"> - Connections with other companies (e.g. energy - Akzo Nobel and Twence) - Money available, externals can participate - Consultation with neighbours, shareholders and others - Spatial planning of expansions - Privatization, less political influences or considerations <p>Small companies</p> <ul style="list-style-type: none"> - Certainty in amount of biomass, long term relation - Local-for-local, smaller distance to locality 	<p>Overall</p> <ul style="list-style-type: none"> - No interest in nature when economy drops / worsened financial situation of company - Governmental regulations - Biomass : fluctuations, uncertainty about input - Nature organizations only asking for money, but they need to be initiators/proposing projects to participate in <p>Large companies</p> <ul style="list-style-type: none"> - Cooperation with municipalities can be difficult <p>Small companies</p> <ul style="list-style-type: none"> - Only local initiatives considered as interesting

6.7 Municipalities

Companies are an obvious stakeholder, whereas municipalities seem to be completely different. However, municipalities can also have an important role in the creation of linkages between nature and business in the region. A municipality can support in creating chances and possibilities, via for example permits and suitable regulations, or more actively stimulate the creation of linkages. An interview with the municipality of Enschede showed that their possible role is not really being recognized within this municipality. The municipality sees Enschede as being a green city already, where there is no need for 'promotion of green'. Furthermore, the area around Enschede does not have so much nature and landscape. Currently, the project 'Rondje Enschede' is being developed to connect the city with the rural area. This is a large scale and long term project, which also involves for example agriculture and recreation. For now, the municipality is in the position to say that there is no need for more. The policy of this municipality focusses on other things than nature, nature is of secondary importance. It became also clear that municipalities do not have an insight of how other municipalities deal with these topics. However, the idea of a more active participation of inhabitants of the city or region is present in Enschede, via creating awareness and raising responsibility. Connecting business and nature could be part of this. But where are those connections, or where can they be created? Who is responsible in this process? What can be the actual role of a municipality? And how could other stakeholders, like nature organizations, be involved? The municipality still faces many questions and unknowns, so putting ideas into practices is still something of the future.

6.8 Conclusion

A remarkable outcome of the analysis is the shared thought of businesses to be also responsible for nature, next to the government. All companies are aware of their impact on the environment, put effort in reducing the impact and try to incorporate sustainability programs. This contributes also to image building of companies, of which they are more and more aware. Therefore, all companies are looking in one way or another for profitable ways of investing in nature. In the interviews it is often heard that business is interested in participation in nature-related projects, do have the money for it, but often do not know how to put it into practice. This requires an active approach of companies by

nature organizations. These organizations should not just be asking for money, but put effort in initiating projects and actively involving companies. Chances can be found in for example existing cooperation processes between companies, or, more concrete, in delivering biomass for further processing, an idea in which already two companies indicated to be interested in.

Currently, the economic situation of companies is not the best, and then nature has not a high priority. This is an extra incentive for nature organizations to start initiatives in order to get companies involved. Beside this, municipalities do not yet really recognize their role, or how to connect nature and business in practice. For some nature has not even a high priority. This all points towards the necessity of a pro-active attitude of nature organizations.

7. Analysis of the expert interviews

The added value of nature and landscape for the business sector is an issue that raises many questions and calls out for an approach that investigates the topic from many different angles and perspectives. Yet the literature on this topic is very much present, it is a bit more difficult to apply it to the region of Twente. To gain better understanding of the topic and to know how this could be applied in Twente, it was important for the project that several experts on the region and topic were included. Therefore the team decided to conduct special expert interviews with a consultant, estate steward, researcher and an account manager of a nature foundation. These interviews add valuable information to the project since the fields of expertise of the experts are somewhat deviating from one another, but nonetheless are connected to the subject of this project. We were provided with more specific information about the region of Twente, but also with general and specific knowledge about the linkage creation between business and nature and landscape. These interviews together with the literature research serve as a guideline for understanding the developments and current stage in the connection of business and nature and landscape. This chapter is meant to go deeper into the problem of this project taking into account the perspective of the experts. This will show possible opportunities for Landscape Overijssel and Twente about this problem in the future, but it will also provide an insight in possible threats and difficulties.

7.1 The importance of connecting nature and landscape and business

The interaction between nature and business is overall being acknowledged by the experts. The topic of this project is relevant in times when governmental subsidies for nature and landscape are decreasing. Therefore it is understandable that nature organisations are in the search for new projects and new money. The government is pulling back and will not be the one that maintains the landscape anymore. Also, in the Netherlands the government is not that much oriented on nature and landscape, compared to the system in Germany.

However, the landscape has to be maintained, and therefore there should happen something. Neglect of nature and landscape is not visible immediately, but when it becomes evident suddenly, there has to be done a lot to restore it. Twente is a region that is oriented on agriculture. It is visible in the landscape that has typical characteristics and farmers are a substantial part of it. What is valued in Twente are the hedges, farms, 'coulissen' landscape, estates (Twickel) and the tidiness of the landscape. A picturesque like landscape exists here and the somewhat conservative line of thought amongst farmers in the region has saved the landscape from changing too much.

The current situation of recession and a subsidy-stop from the government has made the issue of linking businesses with nature and landscape more important than before. Businesses can be connected to nature and landscape, but this will only be possible to a certain extent. It is important to make the distinction between sectors, size and focus of businesses. Larger companies that have no connection to the surrounding areas will not show much interest in biodiversity projects, while companies that market themselves as typical Twents and thus have regional roots will be easier to persuade with the right proposition. An example of that is Grolsch. What is important for companies to be interested in green is:

- Own goals;
- Location development;

- Image.

Overall companies are mostly interested in a good infrastructure and possibilities for expansion, but it sells when a company has a green image. Nowadays customers are paying much more attention to that. CSR is almost a must for companies. The 'Pact van Hengelo', a network that have 'people, planet and profit' as one common goal, is an example in the region of Twente. However, the government is still an issue of concern. As long as the government is still having a lot of influence on how things in constructing nature and landscape should be done without leaving much room for other actors (companies, nature organisations) to have a say, it will be very hard to get the interest of companies. Still, when the companies get a positive influence from planning for biodiversity (social, management) and the government will leave room for others to decide, the willingness will be there.

7.2 The role of Landscape Overijssel

The challenge for Landscape Overijssel is to be able to transfer the message to companies with taking into account the individual level as well as clusters of companies. They should be aware that there are precursors, average performers and laggards when considering biodiversity issues in connection to their business practices. It is the decision of Landscape Overijssel which companies they will approach and for what reason. Will they approach laggards and persuade them to participate, or will they concentrate their focus on average performers and precursors? Landscape Overijssel should have both sides of supply and demand in store for companies: show offers to companies or ask them what Landscape Overijssel could do for them.

One of the outcomes from every interview is that it is clear that the experts believe that Landscape Overijssel should be more pro-active in attracting and approaching companies. Currently, because of the economic recession, the region of Twente is hit hard. Especially the construction sector is struggling at the moment and probably this is not the right time to approach such a sector. But in five to seven years this may have been changed again. Landscape Overijssel should forge the iron when it is hot. Nature organisations are still too much focused on the government, but it is the estimation of one of the experts that the government will be broke for the years to come. The will to act may be there, but there will be little (financial) room to actually carry it out.

There will be willingness from businesses to fill in that gap, but as long as the nature organisations are not willing to invest in nature and landscape themselves, why should a company do it then?

Good examples for Landscape Overijssel to consider are nature-based products like mushroom nurseries in hedges, fruit trees on company terrains (for employees) and (re)developing biodiversity on business sites. Investing in health (landscapes) and quality of life (in cooperation with e.g. health insurance companies) are hot topics as well.

Especially the importance to (re)develop biodiversity on business sites is being acknowledged by the experts. In The Netherlands there were constantly popping up new business sites in the 50's, 60's and 70's because it was quick money for the municipalities. Quite a lot of these sites are 'rotting away' now. There is a lot of potential for an organisation like Landscape Overijssel to makes those sites attractive again. If the area will become attractive and more sustainable, the buildings that are standing there will also become more attractive to work in (even when they are not completely fit according to working environment legislation). The business site should become a place that is not only attractive for the people working there, but also for the general public. It should be open for

people to visit, and possibly these visitors can learn something about the companies located there as well. Former abandoned land should become a peoples' magnet.

In the end it is all about strategic alliances and partnerships because Landscape Overijssel will not make it on its own. The organisation is local and that is a big plus towards companies. The role they have is important because they can come up with ideas, should present a clear message, be the initiator for projects and are able to make use of their network (like members, friends or business clubs). The projects with several stakeholders and an approach toward a larger area will probably have the highest potential. A very good example is 'Hart voor de Heuvelrug' in the province of Utrecht. It is a project where people live, work, recreate and receive health care, which had an area-approach in which many stakeholders like municipalities, Utrechts Landschap and land-owners, participated. Landscape Overijssel could aim for such projects as well.

When nature organisations like Landscape Overijssel redefine their role to their members and the general public and make use of the 'room' that will probably come from a retreating government there will be possibilities to make more and better linkages between businesses and biodiversity.

8. Conclusion and suggestions

It has been researched and generally known that if the economy in a country is doing well and is well organized, there also is more care for nature and landscape conservation and development. When this is not the case, the interest for nature based projects decreases and people and businesses are less willing to pay for nature or willing to participate in projects.

However, sustainable business practices and accounting for sustainability issues is something what can be increasingly seen in strategic policies of companies. This results in companies mitigating their impacts and influences on nature and landscape around them, but also more direct as in the use of resources and materials. As a result of our stakeholders' interviews we see that image and reputation, the 'doing business right', are very important aspects for the enterprises in Twente. An issue of running and developing sustainable CSR policies are of importance for as well large companies as SMEs and even some micro enterprises in the region. The long term thinking in order to ensure public and legal license to operate, participation in sustainability projects as marketing tools and a general public's awareness about doing 'green' business forms a good framework for nature conservation organizations (like Landscape Overijssel) to approach enterprises with propositions for (future) cooperation.

In Twente, several companies already contribute and care for the development and conservation of nature and landscape. Their involvement is financial, but also physical (e.g. construction of direct company surroundings). The interviews and survey made clear that the willingness of companies to participate in projects is there, but with a different approach depending on the business practice of the enterprise and the sector of operating. Business enterprises are looking for specific projects with direct involvement and direct benefits. Generally large companies do have more financial capital available for sustainability issues, whereas SMEs and micro enterprises are looking for more feasible projects where they can contribute within their core business activities rather than giving only financial input. Additional to that all interviewed enterprises have a higher preference for physical participation (projects connected to core business or involvement of the employees) than financial contribution to cooperation projects. The local awareness is more typical for small scale companies than for representatives of global enterprises located in Twente. When a company is rooted locally, it is more likely that it has more interest in local projects in which it can participate. In the case of Bio Forte, this means looking for feasible projects in which to participate and doing this by the companies' philosophy: local resources for local customers.

Still there is a lack of ideas and ways to connect nature and landscape to companies. Whilst the willingness is there, it is not always clear to companies in different sectors what other ways there can be to link to nature and landscape conservation and development and how they can benefit from it. Without taking into account the direct business practices of the company, like in the case of Twence and Akzo Nobel, there exist additional ways to connect business to nature and landscape. Companies are aware of some possibilities, but not about all for certain. Of course this is different per company and per sector, but that is why it is so important to have propositions that target each sector differently. In this, we see a need (also supported by the outcomes of the expert interviews) for a direct, proactive approach towards the business sectors by Landscape Overijssel.

To assess whether good opportunities might exist among the different sectors, a table is created to elaborate more specifically on opportunities and benefits per sector (Table 8.1).

Table 8.1: Opportunities and benefits for different sectors

Sectors	Opportunities	Benefits
<i>Healthcare</i>	<ul style="list-style-type: none"> - new solutions to protect health can be created as only 15% of plants have been investigated for their potential use - outdoor education programmes and the act of visiting nature areas for therapeutic reasons - Influence the quality of life positively 	<ul style="list-style-type: none"> - extracting natural resources for making the medicines (tablets, ointments, powders, tears and so on) - restoration as a way to get rid of stress, for example, “green gyms”, “care farms”, “kinder garden for children with special needs” - physical benefit (for example, trees help to maintain the quality of the air, protect homes from the sunlight or the wind, and flooding). - sustainable attitude of the businesses that help to maintain the nature
<i>Financial</i>	<ul style="list-style-type: none"> - expand the range of its activities - new investment opportunities - equator principles - good image 	<ul style="list-style-type: none"> - in case of the banks, from savings to different kind of products –green cards, green mortgages, green insurance and so on) - large network - The environmental risks can rise the project costs and liabilities, can influence the companies license to operate - attract more clients and customers
<i>Food</i>	<ul style="list-style-type: none"> - creating a brand of locally produced products can have an opportunity for businesses and for nature and landscape - creating an extra income - increasing image as a good company that respond to the increasing demand of the customers to buy healthier and sustainable products - creating awareness towards food wastage and so help companies 	<ul style="list-style-type: none"> - extracting non-timber products like mushrooms, fruits, vegetables, animal products like meat; farmers that sell the products; logistic companies that transport the products - services like events and excursions - more clients and customers - decreased impact on nature

	with their image towards sustainability	
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8.1 Actions

For a nature organization like Landscape Overijssel it is very important to have a pro-active approach of businesses in involving them in nature-related projects. This includes the generation of ideas and making propositions of projects towards businesses that show mutual benefit. A nature organization should have a leading role in proposing initiatives and creating partnerships. This can be in enhancing the green on business park or making biomass commitments, as well as larger projects with more stakeholders involved like an area-approached project.

To ensure a successful development of partnership there are good practice examples from which can be learned. Interesting concepts for a creation of beneficiary outcome for both nature and businesses are already available, and can be linked to business sectors in the region of Twente, so it is important to look at these examples thoroughly and translate them to the situation in Twente. We see chances for business park constructions or (re)development, nature based products and also health landscapes. Another successful example is 'Hart voor de Heuvelrug' in Utrecht, a project in which many stakeholders were involved. As a marketing tool for approaching potential business partners we suggest the use of a marketing material prototype as included in Annex V.

8.2 Points of awareness

We recognize some issues that might become difficulties in developing projects or involving businesses. A first point of awareness is related to the desired attitude of Landscape Overijssel. With a pro-active approach of businesses for example, a first obstacle can be showing the relevance of investing in biodiversity to companies. Not all business sector are aware of their impacts and the possible benefits. The multi-actor partnerships bring along another difficulty, namely including several stakeholders (like companies, municipalities and nature organizations) in one project. We see for example that municipalities might not be aware of the relevance of being involved in projects, and also not recognize their possible role in linkage creation. If municipalities have this line of thought it might become a barrier, because municipalities are important stakeholders for nature-based projects if companies need to be persuaded to participate. A nature organization (like Landscape Overijssel) can have a role in showing the relevance and possible role to municipalities with this perspective.

Besides, it is important that the differences between different levels of partnerships are clear. A cooperation with individual businesses or with business clusters might require a different story. Whereas the needs and relevance for an individual business need to be more business specific, these need to be broader in a cooperation between several businesses. Furthermore, involving companies from several sectors in one project can be more difficult, whereas some sectors are less willing or it is not the right moment with regard to their current economic position.

The last point of awareness is related to the changes in the line of thought of Landscape Overijssel, about looking for new sources and leaning less on governmental subsidies. We see that Landscape Overijssel has broadened their scope and try to realize new connections, but companies are not aware of this new approach. An unclear view of companies on the importance of this approach, as well as the expectations and wishes of Landscape Overijssel, can hold them back from cooperation. Therefore, we think that it is important that companies are informed about these transitions on the level of nature organizations.

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Appendices

Annex I Digital survey

®De relatie tussen economie en natuur en landschap in Twente

Deze vragenlijst is een onderdeel van een adviesproject van vijf MSc studenten van Universiteit Wageningen. In opdracht van Landschap Overijssel onderzoeken wij de mogelijkheden om natuur en landschap en het bedrijfsleven in Twente met elkaar te verbinden. Dit gaat zowel om bestaande verbindingen als om nieuwe verbindingen. Hierin zijn we op zoek naar win-winsituaties. Dat wil zeggen, manieren waarop bedrijven uit verschillende sectoren kunnen bijdragen aan natuurbehoud en ontwikkeling en hoe natuur en landschap tegelijkertijd voordelen kunnen leveren voor bedrijven. Wij willen u vragen om, als uw bedrijf is gevestigd of actief is in Twente, onderstaande vragenlijst in te vullen. Dit zal ongeveer 15 minuten in beslag nemen. Alle antwoorden worden vertrouwelijk behandeld. Uw kennis en ervaringen kunnen een belangrijke bijdrage leveren aan ons project. Alvast bedankt voor uw medewerking.

1. Op wat voor locatie is uw bedrijf gevestigd?
 - Groot industrieterrein
 - Klein industrieterrein
 - Bedrijventerrein
 - Stad
 - Dorp / Platteland
 - Anders, nl.....

2. Wat bepaalt volgens u de aantrekkelijkheid van de regio voor u als bedrijf? (Geef aspecten in volgorde van aantrekkelijkheid: start met de meest aantrekkelijke)
 - Bedrijven en economische ontwikkeling
 - Natuur
 - Landschap
 - Infrastructuur
 - Landbouw
 - Stedelijk gebied
 - Recreatieve voorzieningen
 - Gezondheidszorg voorzieningen
 - Grondprijs
 - Ruimtelijke uitbreidingsmogelijkheden
 - Anders, nl.....

3. Hoe belangrijk vindt uw bedrijf de volgende aspecten van natuur en landschap in Twente?
 Waardering van 1 – 7 (1 = totaal onbelangrijk, 7 = zeer belangrijk)

	1	2	3	4	5	6	7
Hoge biodiversiteit							
Actief natuur- en landschapsbehoud en ontwikkeling							
Recreatieve waarde							
Geologie (bv. bodem, zoutwinning)							
Coulisselandschap van Twente (houtwallen en heggen)							
Woongenot							
Economische waarde (hout, grondstoffen, voedsel etc.)							
Landgoederen							
Bos en heide							
Anders, namelijk							

4. In welke mate bent u het eens of oneens met de volgende stellingen. Selecteer één waarde per stelling.

	Helemaal mee oneens	Enigszins mee oneens	Eens noch oneens	Enigszins mee eens	Helemaal mee eens
Mijn bedrijf heeft direct profijt van de omringende natuur en landschappen in Twente (grondstoffen/producten, gezondheid etc.)					
Mijn bedrijf heeft indirect profijt van de omringende natuur en landschappen in Twente (waterzuivering, bodemvruchtbaarheid etc.)					
Mijn bedrijf heeft directe negatieve invloed op de omringende natuur en landschappen (CO2 uitstoot, afval, winning van hulpbronnen etc.)					
Mijn bedrijf heeft indirecte negatieve invloed op de omringende natuur en landschappen (in de productieketen bijv. gebruik oncertificeerd hout)					

5. Bent u het eens of oneens met de volgende stellingen?

	Eens	Oneens	Eens noch oneens
Vindt u dat natuuronderhoud en ontwikkeling alleen een taak is voor de overheid?			
Vindt u dat een bedrijf moet bijdragen aan natuuronderhoud en ontwikkeling?			
Vindt u dat meerdere bedrijven tezamen moeten bijdragen aan natuuronderhoud en ontwikkeling?			
Vindt u dat overheid en bedrijven moeten samenwerken in de bijdrage aan natuurbehoud en ontwikkeling?			

Open vragen

6. Mijn bedrijf beïnvloed de regionale omgeving van Twente

- Ja
- Nee

Zo ja, op welke manier?

.....

7. Mijn bedrijf draagt op dit moment financieel bij aan natuurbehoud in Twente

- Ja
- Nee

Zo ja, op welke manier?

.....

8. Mijn bedrijf draagt op dit moment inhoudelijk bij aan natuurbehoud in Twente

- Ja
- Nee

Zo ja, op welke manier?

.....

9. Mijn bedrijf kan in potentie financieel bijdragen aan natuurbehoud en ontwikkeling in Twente

- Ja
- Nee

Zo ja, op welke manier?

.....

10. Mijn bedrijf kan in potentie inhoudelijk bijdragen aan natuurbehoud en ontwikkeling in Twente

- Ja

- Nee

Zo ja, op welke manier?

.....

11. Natuur en landschap in Twente draagt op dit moment bij aan mijn bedrijf

- Ja
- Nee

Zo ja, op welke manier?

.....

12. Natuur en landschap in Twente zouden in potentie bij kunnen dragen aan mijn bedrijf

- Ja
- Nee

Zo ja, op welke manier?

.....

13. In welke mate maakt uw bedrijf gebruik van de onderstaande *ecosysteem diensten* in Twente? (*ecosysteem diensten* zijn producten en diensten die ecosystemen leveren waarvan de mens gebruik kan maken zoals hout, maar ook schoon water en schone lucht).

Selecteer één waarde per dienst.

	Nooit	Zelden	Soms	Vaak	Altijd
Productiediensten (leveren van producten of natuurlijke grondstoffen)					
– Voedsel					
– Hout en vezels					
– Brandstoffen					
– Zoet (drink) water					
– Medicijnen/medicinale stoffen					
Regulerende diensten (reguleren van ecosysteem-processen, zoals waterzuivering)					
– Verbeterde luchtkwaliteit					
– Klimaatregulatie					
– Regulering van (menselijke) ziekten					
– Waterzuivering					
– Bescherming (erosie en natuurrampen)					
Culture diensten (immateriële zaken)					
– Recreatie en ecotoerisme					
– Spirituele en religieuze waarden					
– Educatieve waarden					
– Groenbeleving					
– Emotionele waarde van de streek/regio					
Ondersteunende diensten (basis voor goed functioneren ecosystemen, zoals een schone bodem)					
– Bodemvruchtbaarheid					
– Productie van biomassa					
– Kringloop van nutriënten					
– Kringloop van water					

14. a. Hoe waarschijnlijk is het dat uw bedrijf meedoet aan projecten voor natuurbehoud en ontwikkeling in Twente? (bv. als marketingstrategie of beleid maatschappelijk verantwoord ondernemen)

Schaal van 1- 7 (1 = zeer onwaarschijnlijk, 7 = zeer waarschijnlijk)

1	2	3	4	5	6	7
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- b. Indien 5 of lager, om welke redenen?

.....

- c. Indien 6 of hoger, om welke redenen?

.....

15. Aan welke van de volgende projecten zou uw bedrijf bereid zijn om deel te nemen in Twente?

Schaal van 1-7 (1 = geen interesse, 7 = hoge interesse)

	1	2	3	4	5	6	7
Mogelijkheid voor tijdelijke natuur op nog niet geëxploiteerde (bouw) locaties							
Verhogen van de aantrekkelijkheid van de omgeving rond uw bedrijf							
Verhogen van de aantrekkelijkheid van de leefomgeving van de regio							
Verhogen van de aantrekkelijkheid en uitstraling van de natuur en landschappen in Twente							
Filantropie/donatie							
Financiering van natuurontwikkeling door middel van een investering in een specifieke bankrekening (zogenaamde streekrekening), waarvan een deel van de rente wordt besteed aan een regionaal project voor natuurbehoud/ontwikkeling							
Financiering van natuur via een voucher (betaald door bedrijf) voor klanten, relaties en/of werknemers; de opbrengsten hiervan worden gebruikt voor de ontwikkeling of behoud van natuur in Twente, te kiezen door de ontvanger							
Landschapsveiling; adopteer een stukje natuur/landschap als bedrijf via een landschapsveiling (bv. heg, houtwal, bospoel)							
Ander project, bijvoorbeeld							

16. Naam van uw bedrijf (optioneel)

.....

17. Sector waarin uw bedrijf opereert

- Voedsel sector
- Transport sector
- Financiële en zakelijke dienstverlening sector
- Toerisme en vrije tijd sector
- Bouwsector
- Energie sector
- Natuur ontwikkeling en behoud
- Zorg sector
- Industrie sector
- Afval sector
- Handel (detail en groot handel)
- Anders, namelijk.....

18. Bedrijfsschaal

	Lokaal in Twente	Regionaal in Overijssel	Nationaal	Internationaal
Vestigingsplaats				
Afzetgebied				

19. Aantal werknemers in uw bedrijf

- 1-10
- 11-50
- 51-250
- > 250

20. Omzet bedrijf per jaar

- < 100.000 EUR
- 100.000 – 500.000 EUR
- 0,5 – 2 mln EUR
- 2 - 10 mln EUR
- 10-50 mln EUR
- > 50 mln EUR

Aanvullende opmerkingen:

.....

Annex II Interview questions companies

Objective

What are the connections between nature and landscape in Twente and the company, and what is their vision on possible linkage creation?

Nature and landscape aspects of Twente (positive and negative)

- How important is the nature and landscape in the region for your company?
- What is the strength of nature and landscape in Twente (in relation to company)?
- Which weak points of nature and landscape in Twente do you see?
- What can be improved in the future?

Businesses and business sectors in Twente

- What would you consider to be the attractiveness of the region for you as a company (and for your customers)? On what does it depend?
- How does your company affect the local/regional environment? And the global environment? Is there any compensation for negative effects?
- Why is your company situated on this specific location?

Linkage businesses and nature in Twente

- Do you think contribution to nature conservation and development in Twente is a responsibility of your company, several companies or from the government?
- What is the current contribution of nature and landscape in Twente to your company?
- What can nature and landscape in Twente potentially do for your business (in the future)?
- How can your business benefit from nature and landscape in Twente? (CSR, MVO, marketing)
- What are the ways for businesses to invest in certain aspect of nature and landscape?
- How do you think your business and nature and landscape in Twente could be connected?

Current situation (in case of existing connections)

- Can you describe the strategy of your business regarding connections with nature?
- In the nature-related projects, did you cooperate with other companies or nature organizations? Which? How did you experience this cooperation?
- How does your business benefit from this relation? And how does nature benefit?
- Have you also faced difficulties within the cooperation between nature and your business?
- What about the future? Are there plans to extend the connections with nature, or plans to invest more or in new ways?

Willingness

- How does your company influence the regional environment?
- Does your company contribute currently to nature and landscape financially? If yes, how?
- Does your company contribute currently to nature and landscape physically? If yes, how?
- Is your company willing to invest in nature and landscape / participate in a nature and landscape related project (financially/physically/other)? If yes, why and how? If no, why?

- Which business sectors might be interested for your company in working together in projects/partnerships?
- What are some difficulties do you expect while working in this kind of projects/partnerships?
- What could your company contribute to nature and landscape in Twente in potential?
- What could nature and landscape in Twente contribute to your company in potential?
- Willingness area-account/landscape auction/voucher?

Annex III Interview questions experts

Objective

What is the opinion of the expert on the creation of these linkages, and what is their experience with this?

(opinion on all aspects of the topic)

Nature in Twente

- What would you consider to be the attractiveness of the region? On what does it depend? (give some examples to lead in the field of thought > nature, landscape, infrastructure, cities, recreational facilities, etc.)
- What are important aspects of nature and landscape in Twente, both positive and negative?
- And specific for companies in Twente?
- What is the value of nature to the cultural heritage of Twente?
- Which ecosystem services are important for certain businesses in Twente?
- Which elements of nature and landscape (typical for Twente) are most interesting for businesses to invest in?

Companies in Twente

- In what ways can nature and landscape be connected to businesses in Twente?
- What is the attitude of the business sector in Twente towards nature?
- What are benefits that companies gain from cooperation with nature and landscape?
- In what way do businesses in Twente invest in nature and landscape nowadays, which linkages do already exist? Or do businesses even invest?

Future opportunities

- What elements of nature and landscape in Twente are weak, do need improvement?
- What do you think could be improved in the existing linkages, or the creation of them, in Twente? Where are the opportunities?
- Are there also disadvantages of the creation of these linkages?
- What part of the business sector in Twente has the greatest opportunities for creating linkages with nature? Which do you expect to be most interested?
- Which concepts have shown in practice to have the highest potential? Which not?
- Which of the following projects would be most interesting for your company to participate in?
- Temporary nature (on yet unexploited terrains)
 - Enhancing attractiveness of working environment (close by)
 - Enhancing attractiveness of living environment
 - Projects to increase the natural attractiveness and beauty of nature and landscapes in Twente
 - an area account
 - Veluwe-voucher

Involvement of companies

- How do you recognize the willingness of companies, or the opportunities for linkage creation, for investment?
- How can businesses that are already close to nature be involved? What is the role of a nature organization in this?
- How can businesses that are not connected to nature at all, be involved? How can the relevance to do so be shown to them best?
- How can the added value of nature to the business sector be expressed? Is this necessary to express it in monetary terms, or what is most effective?

Annex IV Reports for Knowledge Workplace 'Twente'

First report – 22th of May

Een braakliggend bouwterrein waar de natuur zich vrij kan ontwikkelen en zo kan fungeren als kraamkamer voor planten en dieren. Dit concept, genaamd 'Tijdelijke Natuur', wordt momenteel toegepast in het gebied rond zandwinplas Eesterwold, vlakbij Steenwijk. Het is een samenwerking tussen de projectontwikkelaars van het terrein en Landschap Overijssel, een organisatie die zich inzet voor beheer en ontwikkeling van natuur en landschap in de provincie. Door middel van dit concept wordt een win-win situatie gecreëerd voor beide natuur en het bedrijf.

Landschap Overijssel wil meer van dit soort concepten toepassen in de provincie, en specifiek in de regio Twente, maar hiervoor moeten eerst de mogelijkheden in kaart gebracht worden. Dit is waar wij, vijf studenten van Wageningen University, ons mee bezig gaan houden. In negen weken zullen we kijken naar de toegevoegde waarde van natuur en landschap voor de bedrijfssector in Twente. Ons eerste doel is het in kaart brengen van de connecties tussen natuur in de regio Twente en de bedrijfssector. Hoe is de bedrijfssector afhankelijk van de natuur en vice versa. En nog belangrijker is de vraag hoe natuur en bedrijfssector van elkaar kunnen profiteren. Een tweede onderdeel is advies uitbrengen over welke connecties verder uitgewerkt kunnen worden, en welke concepten hiervoor gebruikt kunnen worden.

Onze groep bestaat uit vijf studenten met allemaal een verschillende professionele achtergrond. Kennis op het gebied toerisme en milieu, bos-en natuurbeheer en biologie wordt in dit project bijeengebracht en uitgewisseld om zo een goed advies uit te kunnen brengen. De eerste drie weken, waarin er gewerkt is aan het schrijven van een projectvoorstel, zijn alweer bijna voorbij...

Second report – 12th of June

Een mooi idee, dat van die tijdelijke natuur op braakliggende bouwterreinen. Maar welke andere ideeën kunnen toegepast worden? Welke concepten zijn al eens eerder in praktijk gebracht? En ook die win-win situaties zijn veelbelovend, maar welke bedrijven willen hierin investeren? En hoe zijn de bedrijven die hier belang in hebben te herkennen?

Na de startfase, waarin het onderzoeksvoorstel is geschreven, zijn we nu volop bezig met het praktische werk om een antwoord te vinden op onze vragen. Om inzicht te krijgen in bestaande en potentiële connecties tussen de natuur en bedrijven in Twente gebruiken we een digitale vragenlijst. Deze is in de afgelopen week door ons ontwikkeld en ook verstuurd naar een groot aantal bedrijven. Nu is het wachten op respons, maar de eerste reacties zijn inmiddels al binnen! Voor het verkrijgen van meer specifieke en diepgaande informatie over een aantal bedrijfssectoren gaan we daadwerkelijk in gesprek met de bedrijven zelf. Zo hebben we afgelopen vrijdag een heel interessant gesprek gehad met een medewerker van Twence, een groot energiebedrijf van Twente. Voor komende weken staan er nog meer interviews in de planning.

Om een beter begrip te krijgen van de mogelijke concepten voor het creëren van de connecties tussen natuur en bedrijven schakelen we de hulp in van mensen met kennis en ervaring op dit gebied. Zo konden we al in gesprek gaan met iemand van de directie van het landgoed Twickel in Twente en met een onderzoeker van Alterra, een Wageningse kennisinstituut.

Aanstaande vrijdag is het ook tijd voor het presenteren van de tussentijdse resultaten aan Landschap Overijssel. Tot dan, en ook in de komende weken zullen we ons concentreren op de verdere interviews en de resultaten van de enquête.

Third report – last week

To be written.

Annex V Marketing material



Investeren in natuur en landschap in Twente

Winstgevend voor de natuur

Winstgevend voor ***uw bedrijf***

Informatie over hoe uw bedrijf kan samenwerken met Landschap Overijssel, en dit winst oplevert voor zowel uw bedrijf als de natuur in Twente

Landschap Overijssel

Landschap Overijssel beschermt, beheert en ontwikkelt natuur & landschap met kwaliteit voor mens, plant en dier zodat het er goed leven is. Daarnaast organiseren wij allerlei activiteiten om natuur & landschap te beleven. Wij zijn een organisatie met deskundige mensen, betaald en onbetaald, die zich met hart en ziel inzetten voor natuur & landschap.

Daarnaast werken we aan de uitdaging om natuur en landschap met het bedrijfsleven te verbinden. We zoeken naar manieren om bedrijven te laten profiteren van de voordelen die natuur & landschap kunnen bieden, evenals de input die bedrijven kunnen geven aan natuurbehoud en ontwikkeling. Het gaat erom wat natuur & landschap en het bedrijfsleven voor elkaar kunnen doen en betekenen. Geen makkelijke opgave, maar wel een kans om de toekomstige ontwikkeling van natuur en landschap meer te verbinden met iedereen die er woont, werkt en recreëert.

Connecties tussen uw bedrijf en natuur & landschap in de regio

Hoe heeft uw bedrijf invloed op natuur & landschap in de regio? En wat betekent natuur & landschap voor uw bedrijf?

- Gebruik van natuurlijke hulpbronnen
- Gebruik van materialen
- Gebruik van ecosysteemdiensten zoals schoon water
- Afval en afvalverwerking
- Impact en invloed op (directe) omgeving zoals grondvervuiling en CO² emissies
- Functie van bedrijventerreinen en/of bedrijfsparken in het landschap
- Inrichting van het bedrijventerrein of het bedrijfspark
- Ruimte voor de natuur in, op en om het bedrijfsgebouw
- Bijdrage aan een groen imago en reputatie van het bedrijf

Voordelen voor natuur & landschap en bedrijf

De connecties tussen natuur & landschap en uw bedrijf kunnen verder uitgewerkt worden door middel van projecten, waarin Landschap Overijssel een belangrijke ondersteunende rol kan bieden. Het deelnemen aan projecten levert zowel voordelen op voor de natuur als uw bedrijf:

- Welwillendheid richting klanten, partners en omwonenden
- Bijdrage aan het duurzaamheidsbeleid van uw bedrijf (Maatschappelijk Verantwoord Ondernemen)

- Verhoogde aantrekkelijkheid van uw bedrijf voor werknemers
- Verhoogde aantrekkelijkheid van de regio en uw bedrijfsomgeving
- Een schonere en gezondere werk- en leefomgeving
- Duurzame energie zoals uit biomassa
- Het delen van kennis, ervaring en financiële middelen
- Recyclen, hergebruik en vervanging van (duurzame) materialen
- De samenleving wordt actief betrokken in natuurbehoud en -ontwikkeling
- Benchmarking
- Kostenbesparingen
- Investeren in de toekomst en een verhoogde medewerking van de omgeving
- Indirecte financiële voordelen voor uw bedrijf (zoals verkorte vergunningaanvraag)
- Nieuwe mogelijkheden tot samenwerking met andere bedrijven en belanghebbenden
- Verminderde impact van bedrijfsprocessen op natuur
- Wederzijds begrip tussen bedrijven en natuur en landschap
- Integratie van uw bedrijf in het landschap

Voorbeelden van projecten in Nederland

- Rabo Streekrekening: op een eenvoudige manier sparen voor behoud en ontwikkeling van natuur in de regio
- Levering van biomassa: groenafval uit de natuur wordt gebruikt voor de productie van groene energie
- Groen op uw bedrijventerrein: het terrein waar uw kantoor of productiehal gevestigd is biedt ruimte voor de ontwikkeling van natuur en een habitat vormen voor allerlei planten en diersoorten

Meer informatie

Wilt u ook dat uw bedrijf voordeel kan halen uit de natuur? En dat de natuur in de omgeving kan delen in de winst van uw bedrijf? Neem contact op met Landschap Overijssel. Wij bieden advies, begeleiding en uitvoering in projecten waarin uw bedrijf en natuur samenwerken. Kijk voor meer informatie op www.landschapoverijssel.nl of bel met Eibert Jongsma 0529-408376.

Citaten voor mogelijk gebruik

“Wij kunnen een platform zijn waar verschillende bedrijven hun initiatieven kunnen tonen aan een groot publiek.” (Museum in Twente)

“Omwille van het lokale belang willen we participeren in projecten voor natuurbehoud en –ontwikkeling.”

“Ons bedrijf kan bijdragen door middel van het verstrekken van kennis en ervaring, we kunnen stages aanbieden en participeren in pilot projecten.”

“Een groen imago is goed voor mijn bedrijf.”