Data & Development Lab

Valuable tourism is to work on balance

NBTC
Nederlands Bureau voor Toerisme & Congressen

Centraal Bureau voor de Statistiek

CELTH Centre of Expertise leisure, tourism & hospitality

Content

Introduction

Motive

Since the publication of *Perspectief Bestemming Nederland 2030* (NBTC, 2019) and *Waardevol toerisme: onze leefomgeving verdient het* (Council for the Environment and Infrastructure [Rli], 2019), 'balance' is a hot topic in the tourism domain.

Many parties, such as governments and destination management organisations, need insight regarding their destinations, but an important first step is to define and operationalise balance: what is meant by balance and how can you measure it? This prompted the project 'Valuable tourism is to work on balance'. The project was carried out by The Netherlands Board of Tourism & Conventions (NBTC), HZ University of Applied Sciences, Breda University of Applied Sciences (BUas) and NHL Stenden University of Applied Sciences – which collaborate with the Centre of Expertise Leisure Tourism & Hospitality (CELTH), and Saxion University of Applied Sciences. The project was partly enabled by the Data & Development Lab of NBTC, CELTH and CBS. This publication is this project's result.

Although balance in the leisure domain in the Netherlands has recently received a lot of attention, (scientific) research has been conducted for many years on related topics, such as capacity, support and social impact, pressure, development space, etc. Insights gained from these studies are of great importance for developing knowledge and for making 'balance' a measurable value.

This project aims is to provide policymakers, destination managers and researchers with tools for understanding balance at their destinations. We achieve this through the provision of an overview of available data and possible indicators for measuring the various subtopics relevant to balance. Destinations can ultimately decide for themselves which indicators best fit the nature of their destination and research question. It is also important to realise that balance cannot be measurable exactly. Research into this topic should therefore be mainly considered as a conversation starter, to help raise awareness and to reveal the choices which need to be made in (tourism) policy and destination management.

The relevance of balance

Tourism and recreation is one of the fastest-growing industries in the world. At many destinations, tourism and recreation contribute to an appealing living environment and the sector provides a significant contribution to the regional economy and to employment. It is now widely recognised that tourism and recreation can also trigger a range of negative effects. The extent of positive and negative effects on the population, economy, nature and living environment varies per destination. It depends on the nature and extent of tourism and recreation at the destination: consider the distribution in space and time, length of stay, the reason for visiting and visitor behaviour. Together, these make up the tourism/recreation pressure at a destination and together it has all kinds of possible positive and negative impacts. Ideally, the balance should be positive, at destination level the positive impact of tourism and recreation should outweigh the negative impact and both types of impact should be equally distributed among those involved. In practice, the drawbacks are often experienced by others than those who feel the benefits.

Well-considered tourism/recreation policies require a careful analysis of **all the** impacts of tourism and recreation on the economy, society and the living environment, according to the Rli in its report Waardevol toerisme (2019).

The effect of all impacts together is different for each destination.

The nature of the population, the natural environment, the tourism/recreation infrastructure, and the economic structure together determine the physical and social capacity of the destination to cope with tourism/recreation pressure and its impact: also called the capacity of the destination. Initially, capacity studies had a strong focus on determining the maximum number of visitors a destination can receive without significant social, economic and/or spatial disruption. In more recent years, capacity is no longer seen as an exact number, but more as a measure of sustainable destination management. This is also reflected in the World Tourism Organisation's definition of sustainable tourism, albeit worded slightly differently: "Tourism that takes full account of its **current and future** economic, social and environmental impact, addressing the needs of visitors, the industry, the environment, and host communities".

Impact versus capacity

As a basis for the development of the various components of balance, the scale below was used. With "impact" on one side of the scale and "capacity" on the other. As a destination, you want to keep these two sides "balanced" as much as possible. The impact scale is primarily determined by tourism/recreational pressure. How busy is a place at a specific time? And how does this tourism/recreational pressure develop? Tourism/recreational pressure leads to positive and negative impacts. When looking at these forms of impact, economic impact, social impact and impact on nature and the environment can be distinguished. For each of these types of impact, the positive impact should be greater than the negative impact and the impact should be equally distributed among different stakeholder groups.

The other side of the scale concerns capacity. There are several subtopics when looking at capacity. What is the natural environment's limit? (ecological capacity). What is the local population's (social capacity, often called support base)? What can visitors themselves handle (psychological capacity)? When is the limit of amenities and facilities (resources) reached (physical capacity)? And how to avoid becoming too economically dependent on tourism and recreation (economic capacity).

Application of this publication

There is no single method which examines both impact and capacity. Each method deals with one side of the scale, while balance only becomes visible when looking at both sides. Therefore, for each subtopic, this publication lists the most useful elements of a range of methods and articles, looking at applicability in the Netherlands. Each chapter focuses on one subtopic. It lists possible indicators and suggests which data are needed or already available. Combining all chapters creates a method for assessing balance in tourism.

All things considered, such an analysis is explicitly not about finding maximum numbers or determining exact limits, but to get to an optimal situation. Several angles are important here:

- the positive impact of tourism and recreation should outweigh the negative impact;
- the impact should be shared equally among stakeholders;
- tourism/recreational pressure and the resulting impact should fit within the capacity of the destination, both by subtopic and in its entirety.

All these perspectives are important in determining the degree of balance for destinations. However, it should be taken into consideration that the available data and methods are not (yet) always suitable to properly capture all these perspectives. In particular, the distribution of impact among stakeholders remains underexposed with the current data and requires focus in future studies and analyses.

Therefore, consider research on this topic mainly as a conversation starter, to help raise awareness and to reveal the choices which need to be made in (tourism/recreation) policy and management of destinations.

Research on balance should therefore be part of the policy cycle related to tourism and recreation. Guiding principles for how analysis and research fit into the whole policy cycle can be found in NBTC's Guideline on destination management and more specifically for natural parks in

Figure 1:
the impact and capacity scale.

the National Parks Bureau's National Parks Guideline. Based on this, direction and initiative would lie with the destinations' government/governments – such ask province(s) and/or municipality(s).

Although it is about tourism/recreation policy, this topic explicitly calls for an approach across industries, which is already reflected in the different types of impact and capacity addressed in this paper.

Tourism/recreational pressure

What is tourism/recreational pressure?

Tourism/recreational pressure is the starting point for an analysis of balance. Tourism/recreational pressure provides insight into the extent of tourism and recreation at a given destination.

The Council for the Environment and Infrastructure in its report *Valuable tourism: our living environment deserves the* distinction between three elements of pressure:

- the ratio of the number of visitors (recreational and tourism) to the number of residents in a given location, in other words: the intensity of tourism and recreation;
- the ratio of the number of visitors (recreational and tourism) to the area of a destination, in other words: tourism and recreation density;
- The way tourists use space and facilities and how this relates to local customs and habits, in other words: visitor behaviour.

Intensity is a commonly used method to map the use in a certain area. For this ratio, the number of visitors is compared to the number of residents in an area. The higher the ratio, the higher the intensity and therefore the higher the number of visitors compared to the number of residents in an area. Intensity is often used in combination with density (number of visitors/overnight stays per km2) used as indicators of pressure in an area.

When tourism/recreational pressure at a destination is high (i.e. high ratios), this does not necessarily result in disturbances or damage. This is closely related to the capacity of a destination's living environment. If it is not sufficient to cope with the tourism/recreational pressure, disturbances or damages may occur. For example, damage to a natural area due to the number of visitors exceeding the natural area's capacity.

Many international studies mainly zoom in on tourism pressure and compare the number of guests or overnight stays in accommodation with the number of inhabitants or the size of the region as an indicator. This method does not offer any insights into recreational pressure, the leisure behaviour of residents and the pressure that this can put on natural and recreational areas, inner cities, etc. This can be calculated when figures on recreational visits (day trips/ recreation by residents) are known.

It is noteworthy that both intensity and density already combine tourism/recreational pressure in relation to the destination (number of inhabitants, surface area) and thus implicitly already provide some insight into the relationship with capacity. However, without understanding the other aspects of capacity, these ratios still have little meaning.

It is important to monitor tourism/recreational pressure at different times and places, as intensity can change over time (e.g., peak periods) and space (crowded places versus quiet spots). In addition, it is not just about the current situation but also about the expected development of intensity.

Many international studies also add the aspect of seasonality. Seasonality indicates the extent to which tourism and recreation are concentrated in a certain period. For typical holiday destinations, seasonality is often very high, as most overnight stays take place in, for instance, the summer months. This therefore gives a degree of pressure on a place during a specific period.

Another widely used method is McElroy & Albuquerque's Tourism Penetration Index (TPI), which combines several indicators into one index (see calculation in the indicator list). This index also includes tourism and recreational pressure, but mainly measures the social, economic, and environmental impact of tourism. The closer to 1 the greater the social, economic, and environmental penetration. By itself, the number itself has little meaning. It becomes useful when it can be compared with other destinations, or at one destination for (intervals of) several years in a row.

Why is this relevant for balance?

Intensity is an important basic indicator of tourism/recreation pressure, along with density and seasonality. These ratios provide an objective method for understanding tourism/recreational pressure in an area. However, when considering the balance issue, perceived crowding is at least as important. This perceived crowding is described in detail in the sections on social impact and social capacity. Therefore, if tourism/recreation pressure is high, it does not necessarily mean that there is an 'imbalance', this depends on the (social) capacity of a destination. It obviously could be a sign that tourism and/or recreation may become unbalanced at certain times.

Application in practice

First, it is important to collect some data on the extent of tourism and recreation. How many recreational visitors and tourists are there in the area in a given period? You also need this basic data to calculate the aforementioned ratios for tourist and recreational pressure. In practice, you often see that figures on day visitors (recreation) are not always (fully) available.

To calculate intensity, density, Tourism Penetration Index (TPI) and seasonality ratios, in addition to these numbers, figures regarding the number of inhabitants and the size of the area are also required. The TPI requires even more indicators. Here, the number of beds, length of stay and spending are also included, among others.

For tourist pressure (intensity and density), numbers for provinces and COROP areas have already been calculated (see indicator overview), based on CBS's Statistics on Accommodation (SLA). However, it should be noted that this data does not include all overnight stays. Nights spent on a permanent pitch or in a second home, in privately rented accommodation and on boats are not included. Ideally, you want to measure intensity for each local or regional area as much as possible. Consideration could be given to using local data on overnight stays, for example, derived from tourism tax records.

Since overnight stays are only part of the total visitor pressure, it is important to also consider day visitors. This includes visitors from the immediate area as well as from other places. This data is not available at the local level, but estimates can be made based on existing data from the former ContinuVrijeTijdsOnderzoek (Continuous Leisure Research), such as the ForVisit model. A new study on the leisure behaviour of the Dutch is currently being conducted, which can be used for this calculation (figures will be available in early 2024). Consideration could be given to collecting data on the number of day visitors in a specific (nature) area, for example through measurements using one of the possible methods (such as, for example, the visitor surveys of the Forestry Commission which have been carried out in almost all provinces).

For recreational pressure, you can also use visitor numbers to calculate recreational density. To this end, the same method as was used to measure tourist pressure can be used, where you plot the number of visitors against the size of the area. Seasonality could also be calculated if this data is available for day visits, for instance, monthly.

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Common indicators:

Indicator	Notes	Required data	
		Currently available data:	Data to be collected:
Guests/ overnight stays	Number of guests and overnight stays of domestic and foreign overnight visitors in a given period.	- **guests and overnight stays** (Province, tourist areas, four municipalities) Source: Statistics on Lodging Accommodations (SLA), CBS; - **guests and overnight stays COROP** Source: Accommodation Statistics (SLA), edited by NBTC; Guests and overnight stays (COROP level).	- possibly supplemented by overnight stays of regular guests, overnight stays in other forms of accommodation through own research or inventory; - Regionalisation of data. Collect own data for data at e.g., municipal level, area level.
Day visitors	Number of day visitors (recreational) in a given period.	- **number of day visitors in nature reserves** (Surveys of visitors in nature reserves have been conducted in several provinces) Source: NBTC-NIPO Research commissioned by Staatsbosbeheer and provinces (example Province of Overijssel); - **number of visitors to cities** Source: (Tourist visits to cities, NBTC).	
Tourism intensity	- Tourism intensity: The ratio of the number of overnight stays (domestic and foreign) to the number of inhabitants in an area; Formula: Tourism intensity = ((# overnight stays) / # residents * 365) * 100	- **intensity by province** Source: CBS, Statistics Overnight stays and Accommodations (SLA) edit NBTC (State of destination NL); - **intensity by COROP** Source: CBS, Accommodation Statistics (SLA) edit NBTC (Tourism Data Centre); - **intensity private rental** Source: EUROSTAT; - **Number of inhabitant**s provinces, COROP, municipality, postal code Source: CBS.	- possibly supplemented by overnight stays of regular guests, overnight stays in other types of accommodation and day visit through own survey or inventory, intensity should then be recalculated; - Regionalisation of data. Collect own data for data at e.g., municipal level or regional level.

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Commonly used indicators (continued):

Indicator	Notes	Required data	
		Currently available data:	Data to be collected:
Tourism density/ recreation density	- Tourism density: The ratio of the number of overnight stays (domestic and foreign) to the area of an area; Formula: Tourism density = (number of annual overnight stays / 365) / km^2 - Recreation density: The ratio of the number of day visitors to the size of an area; Formula: Recreation density = number of day visitors / km^2.	- **density by provinces** Source: CBS, Statistics Overnight stays and Accommodations (SLA) edit NBTC (State of destination NL); - **density by COROP** Source: CBS, Accommodation Statistics (SLA) edit NBTC (Tourism Data Centre); - **land area** (km^2) Source: CBS.	- possibly supplemented by overnight stays of regular guests, overnight stays in other forms of accommodation and day visits through own research or inventory, intensity should then be recalculated; - Regionalisation of data. Collect own data for data collection at e.g. municipal or regional level; - Measure area of specific area (e.g. national park).

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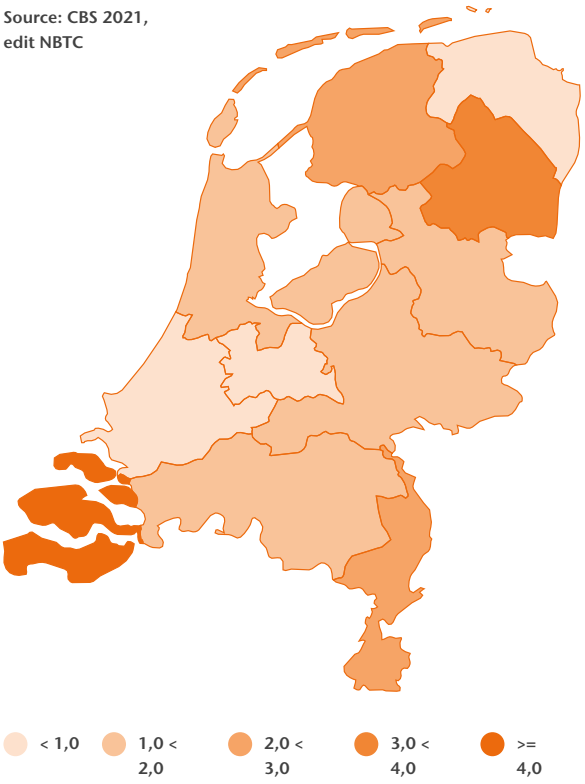
Commonly used indicators (continued):

Indicator	Notes	Required data	
		Currently available data:	Data to be collected:
Seasonal moderation	Gini coefficient for seasonal dependence.	- **seasonality tourism** Source: CBS, Statistics Overnight stays and Accommodations (SLA) edit NBTC (State of destination NL); **- ginicoefficient calculation** Gini calculation can be used in the same way for both tourism and recreation (see online publication for calculation sheet).	- possibly supplemented with overnight stays of regular guests and day visits through own research or inventory, intensity should then be recalculated; - Regionalisation of data. Collect own data for data at e.g. municipal level or area level.
Crowding	Crowding at tourist-recreational sites.		To be collected, e.g. by monitoring crowds. See “good examples”.
Tourism Penetration Index (TPI)	Index for calculating impact. taking various indicators into account.	Which data is needed for this? - number of overnight tourists (x 1,000) - average length of stay (in nights) - number of overnight stays per year (in millions) - number of day visitors (x 1,000) - number of tourist beds - spending per year (in million €) - surface area in km2 - population (x 1,000) (see calculation via online publication).	

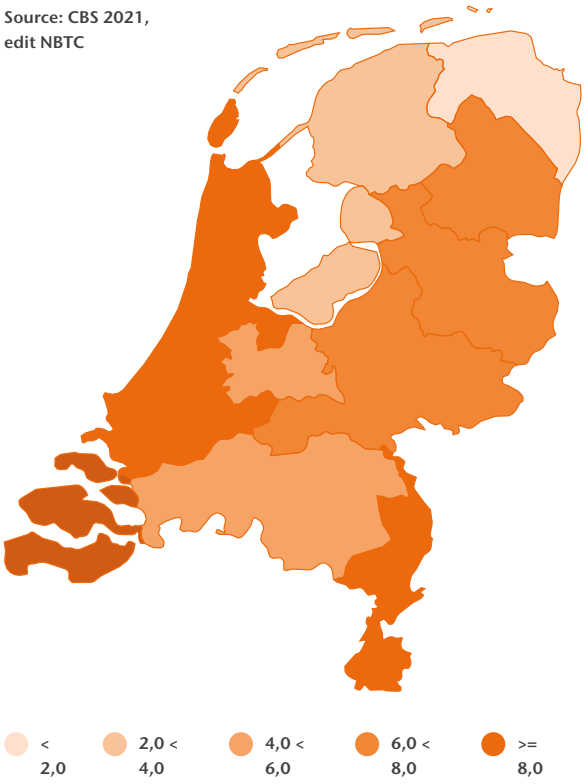
Intensity - Regional differences
Overnight stays per day per 100 inhabitants.

Source: CBS 2021, edit NBTC



Density - Regional differences Number of overnight stays per day per km^2

Source: CBS 2021, edit NBTC



Good examples

- In the "State of Destination Netherlands", tourism/recreational pressure has been calculated for all provinces in the Netherlands as shown on the map of the Netherlands. The darker the colour of the province the higher the intensity (left image) and the higher the density (right image). It does not necessarily mean that high intensity automatically means high density. For the province of Zeeland, this did happen in 2021. Here you can see that both intensity and density are high. For South Holland, this is different. Here you can see that intensity is relatively low compared to other provinces, density, on the other hand, is high. When interpreting the figures, it is important to consider the local context. North Holland's higher density could be due to the high share of overnight stays in Amsterdam, while in the case of intensity, the fact that Amsterdam and its surroundings also have many residents play a part. Tourism/recreational pressure then averages out slightly. As there can be large differences per region and even at the neighbourhood level, it is important to compare the data and regionalise it even further to have a clear picture of tourism intensity. This also helps in interpreting the results.

Source: State of destination Netherlands, NBTC

- Together with partner Resono, Toerisme Veluwe Arnhem Nijmegen collects factual data on crowds at more than 200 recreational locations, such as city centres, attractions, and nature reserves. This data is made available to visitors via a dashboard. Parties working in the industry may consult the data using the Visitor Information Monitor to gain insight into current crowds and visitor patterns.

- Nature and recreation areas visitor research. In collaboration with the national forestry service and the provinces, NBTC-NIPO research conducted visitor surveys in nature and recreation areas. This survey was carried out in almost all provinces. The reports can be consulted on the websites of the respective provinces. See here an example of a visitor survey in Overijssel province (online publication).

Relevant sources and background information

- The Dashboard State of Destination Netherlands provides an overview of many indicators, distinguishing between the themes of visitors, residents and businesses.

- In the 'Valuable tourism: our living environment deserves it's report, the Council for the Environment and Infrastructure stresses the importance of balanced destinations. The Council provides suggestions for policy instruments which can be used.

- The Data & Development Lab of NBTC, CBS and CELTH has made an objective comparison of various instruments which measure crowds and which can be used in visitor management. This allows destinations to choose which pressure monitor is suitable for them.

- The Data & Development Lab of NBTC, CBS and CELTH has made a comprehensive comparison of day visit measurement methods, allowing destinations to choose which method is most suitable for their issue.

- Wageningen University also made a comparison of measurement methods in 2015, but specifically for visits to nature reserves.
  A comparison of monitoring methods for number of visits to nature reserves.

Impact on nature and the environment

What do we mean by impact on nature and the environment?

Tourism and recreation can have both a positive and a negative impact on nature and the environment. By definition, tourism and recreation involve a lot of travel: of visitors by plane, car or other means to and from the destination, of visitors at the destination while exploring the environment, for supplies and of staff.

This leads to increased CO2 emissions and particulate matter (adverse impact on air quality and health) and can, for example, increase traffic congestion.

Visitors use water and energy during their stay, either directly or through the providers of tourist recreational services. Given the energy transition and climate ambitions, it is important to reduce the use of electricity and fuel as much as possible and/or get them from renewable energy sources. The availability of fresh water and drinking/supply water is already a concern in some regions and seasons and will only become more important in the future. In addition, there is also an increase in waste resulting from tourism and recreation and there is the residue of tourist-recreational products and services (e.g., food, laundry, business waste, etc.).

Also, tourism and recreation can put enormous pressure on land use in an area. This may lead to soil erosion, increased pollution and litter, noise and light pollution, for example. These may then lead to disturbance of natural habitats and more pressure on (endangered) species resulting in a degradation of nature. Visitors themselves can also be a cause of this. In addition, it also affects the liveability of residents in and around an area.

There are not only negative effects of tourism and recreation on nature and environment. There is sufficient scientific evidence which shows that visiting nature has a positive impact on mental and physical health (RIVM report Green and Health).

Nature makes an important contribution to an exercise-friendly environment. The National Prevention Agreement has agreed that by 2040, 75% of our residents will meet the exercise standard of 150 minutes of moderate-intensity exercise per week (currently this is less than half). Nature can encourage people to more exercise. In addition, visiting nature may lead to additional awareness and appreciation of nature among visitors, increasing willingness to protect nature. Tourism and recreation may generate additional resources for conservation and development of the natural environment. In several destinations, income from tourism and recreation contributes directly to better protection of nature. Tourism and recreation can therefore contribute negatively as well as positively to nature and the environment.

Why is this relevant for balance?

Combating climate change and preserving natural ecosystems and biodiversity are the main tasks of our time. This means that the negative impact of tourism and recreation on nature and environment should be minimised. Impacts should fit within the (ecological) capacity of a destination.
This is not only important for nature and the environment, and therefore for life on earth, it is also important for the tourism and recreation industry. After all, the natural environment is among the main reasons to visit a destination. Degrading that environment may reduce the appeal of the destination and as a result also have a negative impact on tourism and recreation. It is therefore important from several perspectives to monitor the impact of tourism and recreation on nature and the environment.

Application in practice

In general terms, it should be noted that the negative impact of tourism and recreation on nature and the environment should be minimised. Consider reducing the carbon footprint, lowering water and energy consumption, reducing waste streams and prevent disruptions to nature.

However, indicators which provide insight into the impact of tourism and recreation on nature and the environment are still scarce. This is partly because there is a lack of regional data and data which can prove the impact of tourism and recreation. These numbers are often generic and relating them to tourism and recreation is difficult. Yet, in recent years, we see, due to the growing attention to this topic, that more and more data is becoming available which provides some insight. However, we are far from the desired result and many steps still need to be taken to create a useful overview.

Many indicators related to the impact on nature and the environment are difficult to relate to tourism and recreation. Nevertheless, even generic data may sometimes be used. One example concerns the average amount of waste per inhabitant, an indicator published annually at the regional level by CBS. Zeeland always has low scores in these tables, but the strong suspicion is that this figure is influenced by many visitors in relation to a low population. Therefore, comparing generic data between regions can sometimes still leave an impression of the role of tourism and recreation. However, other factors (e.g. traffic, industry, etc.) should be explicitly considered here.

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Common indicators:

Indicator	Notes	Required data	
		Currently available data:	Data to be collected:
Emissions			
Carbon footprint visitors	Understanding visitors' CO_2 emissions.	- the SASTDEST tool gives destinations insight into carbon footprint and eco-efficiency (guests/tonne CO2). (Possibly to be calculated by BUas); - for a general overview, the national numbers for carbon footprint can be used and divided by number of visitors to a region to get an idea of the order of magnitude. Source: State of destination Netherlands, NBTC, calculation by Centre for Sustainability Tourism and Transport (CSTT), Academy for Tourism, Breda University of Applied Sciences (BUas).	
Raw material consumption			
Water consumption	Annual per capita consumption of water (m^3).	**- water consumption, drinking water Catering, Culture Sport & Recreation** Data still to be divided by number of inhabitants Source: CBS; **- overall water consumption*** Data still to be divided by number of inhabitants Source: CBS.	Regional data on water consumption related to tourism and recreation and average water consumption by region.
Energy consumption	Annual consumption of energy (MWh) per capita.	**- natural gas consumption Hospitality, Culture Sport & Recreation** Data still to be divided by number of inhabitants Source: CBS; **- energy consumption Hospitality, Culture Sport & Recreation** Data still to be divided by number of inhabitants Source: CBS; **- overall natural gas consumption* overall energy consumption*** Data still to be divided by number of inhabitants Source: CBS.	Regional data on natural gas and energy consumption related to tourism and recreation and average energy consumption by region.

** Cause-effect relationship not known. Presumed, however, that there is a connection with tourism and recreation.*

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Commonly used indicators (continued):

Indicator	Notes	Required data	
		Currently available data:	Data to be collected:
Waste			
Waste	Annual per capita waste consumption.	**- waste per municipality per inhabitant*** Source: CBS **- household waste per capita*** Source: Compendium for the Environment CLO.	Waste consumption attributed to tourism and recreation (t).
Health			
Air quality	- exposure Nitrogen dioxide (NO2); - exposure particulate matter (PM10).	**- Nitrogen dioxide (NO2) hospitality, culture sports & recreation** Source: CBS **- Particulate matter (PM10) hospitality, culture sport & recreation** Source: CBS	
Natural			
Protected nature*	Share of protected nature: Formula: protected nature / total land use.	**- bprotected nature by province** Source: European Environment Agency. **- total area of land and water by province** Source: CBS	
Land use*	Number of hectares of nature.	**- number of hectares of nature** Source: CBS	

** Cause-effect relationship not known. Presumed, however, that there is a connection with tourism and recreation.*

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Commonly used indicators (continued):

Indicator	Notes	Required data	
		Currently available data:	Data to be collected:
Disturbance of breeding birds	Disturbance of breeding birds/ animals due to recreation.		- See example of NP South-Kennemerland; ( ); - figures on wild birds in the Netherlands Source: Sovon, knowledge centre for distribution and trends of wild birds in the Netherlands. ( ).
Endangered species*	Red list indicator: endangered plant and animal species.	**- percentage of species not threatened (Red List indicator)** Source: CBS, LNV	Understanding numbers of plant and animal species which are common in the relevant nature reserve. (e.g., the lizards on the Sallandse Heuvelrug).
Biodiversity quality*	Share of key areas for biodiversity which are part of protected nature reserves in the Netherlands.	- **biodiversity in fresh water** Source: United Nations, Department of Economic and Social Affairs, Statistics Division. Sustainable Development Goals (SDG) Indicators Database. Indicator 15.1.2. **- biodiversity on land** Source: United Nations, Department of Economic and Social Affairs, Statistics Division. Sustainable Development Goals (SDG) Indicators Database. Indicator 15.1.2.	
Sustainable offer			
Companies with sustainability certification (e.g. green key accommodations)	Number of Green key companies.	**- number of Green Key companies** Source: Green Key	
Spending on public green spaces and outdoor recreation	Municipal spending on public green space and outdoor recreation.	**- - municipal spending on public green spaces and outdoor recreation** Source: Municipal accounts CBS.	

** Cause-effect relationship not known. Presumed, however, that there is a connection with tourism and recreation.*

Good examples:

- Bird Protection Netherlands, in its report "Disturbance of birds due to recreation", provides an updated overview of the current knowledge of the effects which recreation has on birds, and the measures that can be used to reduce these effects. Based on literature and expert opinions, insights into these effects have been applied to Dutch biotopes and species. The distances at which disturbances occur have been updated.

- North Holland experiences rapid growth and change of recreational pressure. Current nature and recreation areas do not have infinite capacity to accommodate this growth and the capacity of nature does not allow increased recreation in all areas. A cross-regional study was therefore carried out into the 'functioning' of the areas (supply) in relation to the development of demand. How do the areas relate to each other, can recreational use be optimised and what are the future cross-area challenges? A supra-regional analysis and an area-level analysis have been created.

Relevant sources and background information:

- Alterra has carried out a comprehensive study on recreation and nature in Natura 2000 areas. This report describes the possible effects of recreation on Natura 2000 target species and habitat types. Special attention was paid to monitoring recreational behaviour and its effects on nature.

Social impact

What do we mean by social impact?

The social impact of tourism and recreation is about how tourism and recreation affect residents' quality of life.

Here, three categories of social impact are distinguished, which can be both positive and negative:

- impact on residents' well-being;
- influence on social processes;
- impact on the living environment.

Tourism and recreation can have a significant direct impact on residents' well-being. For example, a job in the tourism/recreation sector ensures that a resident experiences personal economic benefit, as described under economic impact. In addition, tourism and recreation can also provide *empowerment*, or strength which a resident derives from tourism and recreation. Consider, for example, the sense of pride a resident may experience because the region he or she lives in is apparently worth visiting. We call this *psychological empowerment*. Tourism and recreation can also contribute to or detract from a sense of belonging to the community. We call this social empowerment. In addition, the extent to which residents feel they have a voice in decision-making on tourism and recreation matters can positively or negatively affect personal well-being. We call this political empowerment. Incidentally, individuals can have very mixed feelings towards tourism and recreation. For example, consider someone who works in tourism but experiences negative impacts in his or her leisure time.

Although not always immediately noticed, tourism and recreation can also influence social processes. This influence can be both positive and negative. Consider, for example, the contribution tourism and recreation can make to a region's identity. Whereas a sense of pride applies to the individual, identity is about the 'togetherness' of a community. The use of regional stories, meaning and symbols within tourism and recreation can further strengthen that identity. However, care must be taken to avoid *commodification*, with local culture becoming a product for tourists in which local residents no longer recognise themselves. To ensure that tourism and recreation provide a positive contribution to identity and a sense of community, it is essential that residents are involved in the development of a destination.

Also relevant to social processes are the cultural exchanges and encounters between people facilitated by tourism and recreation. In addition, apart from regular employment, tourism and recreation offer job opportunities for specific target groups such as the low-skilled, people with a migration background or disadvantaged in the labour market. The sector can therefore make a positive contribution to inclusion, diversity, and social cohesion.

Tourism and recreation can also influence residents' quality of life through the living environment. Especially in smaller towns, for example, tourism and recreation can positively contribute to the level of amenities. Residents then benefit from the greater supply of, for example, catering establishments, events, and cycle paths, but also, for example, a supermarket, a bakery, or a butcher that can exist partly thanks to visitor spending. On the other hand, tourism and recreation can also actually create a one-sided supply of facilities aimed mainly at visitors, pushing out facilities aimed at residents.

The hospitality domain can also make an important contribution to public facilities and infrastructure. More visitors regularly lead to more investment in public facilities such as public transport, healthcare, police and infrastructure. Of course, there is also another downside: visitors may also put pressure on these facilities. This also applies, for example, to the housing market, where we see residents finding it harder to find a house

because - in an already overheated housing market - a growing proportion of housing is used for tourism purposes.

In addition, the presence of tourists and recreational visitors may contribute to a sense of security. For instance, by having more people on the streets in the evening. Or by paying more attention to sufficient cycling and walking paths which residents can also use to get around safely. At the same time, tourism and recreation may also lead to a sense of insecurity. For instance, because of an increase in vandalism and theft.

Criminal infiltration is an area of particular concern. Criminals use legal businesses and service providers for their illegal activities. This is how the underworld and upper world get intertwined. This creates unsafe situations. It disrupts society and undermines the rule of law. Undermining also occurs within the tourism domain, such as the laundering of criminally earned money through catering establishments or the purchase of recreational real estate or, for example, through drug production and prostitution at holiday parks.

Another example of a relationship between tourism and recreation and the living environment is that with natural and cultural heritage. The hospitality domain can generate income which can be used to preserve heritage sites and increase their accessibility. When there is a case of excessive tourism/recreational pressure, however, tourism and recreation can also damage this heritage. Some large-scale tourism/recreational developments even completely alter parts of the landscape. When those landscapes define the identity of an area and its inhabitants, such tourism/recreational development has a major negative impact.

Finally, tourism and recreation often make governments pay more attention to the quality of public spaces. Moreover, the presence of visitors leads to a lively atmosphere. Conversely, if there are too many visitors, it may negatively affect the quality of the living environment.

Why is this relevant for balance?

Previously, we wrote that tourism and recreation can have both positive and negative impacts on residents' personal well-being, social processes, and the living environment. In the context of balance, we often talk about pros (positive impact) versus cons (negative impact). When considering the social impact of tourism and recreation, the resident is at the heart of things. A good balance in terms of social impact is therefore mostly about balancing the pros and cons of tourism and recreation as experienced by residents. And about the search for opportunities to promote positive social impact and reduce negative impact to an acceptable minimum. Too many negative impacts can cause a destination's social capacity to be exceeded. Research by CELTH shows that in practice, residents weigh up the positive and negative impacts: "there is a lot of evidence that when locals experience a lot of economic benefits they have a positive attitude, despite any negative (social) impacts" (Social value of tourism and recreation, CELTH, 2021).

Application in practice

In practice, we see a difference between the perceived impact, or impact that residents experience (subjective) and the impact we can measure (objective). It is therefore important to make both transparent. The perspective of residents should be central to this: only by listening carefully to residents' experiences can we work towards a balance between pros and cons. Understanding the facts can help identify where the greatest positive or negative impact is perceived so that effective measures can be taken.

Good communication of the facts may also help raise residents' awareness of the positive impact of tourism and recreation and the nuance of negative impacts.

An example of how objective (actual) impact and subjective (perceived) impact may differ, comes from Zeeland. Research in this province shows that Zeeland's municipalities invest more than average in public green

spaces and (outdoor) recreation. They spend an average of €104 per inhabitant on this, while the national average is €83. However, residents do not feel that tourism and recreation contribute to the preservation of the natural environment and the development of green spaces; only 32% of respondents agreed with this statement in 2019.

Another example is the perception of crowding. Although research into this is still ongoing, it is expected that residents find places more crowded since Corona, while the actual number of visitors may be lower. One explanation is that because of Corona, people are not as used to crowded places and sometimes fear large numbers of people. Also, there is often a perception that crows consist only of tourists while - especially in and around urbanised areas - it is also residents who recreate in their own environment.

Commonly used indicators

According to research by CELTH, social impacts are generally difficult to quantify and measure. The majority of social impact studies, therefore, translate the impact into a resident perspective. This is then not about actual effects, but perception.

The extent of social impact and how it is perceived is highly dependent on the local context of a place. There are often big differences in sentiment between, say, towns in a municipality or neighbourhoods in a city. Sometimes it can even be one street or one block of houses where specific impacts are experienced and therefore sentiment is also quite different. This is obviously directly related to the extent to which residents meet tourism and recreation. Reliable figures at the local level are needed to measure impact and contrast (subjective) perceptions with objective facts. There are indicators by which the social impact of tourism and recreation can potentially be measured, but actual data is not yet available for all of them. For instance, only in a few places in The Netherlands extensive research was conducted into the experiences of residents.

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Indicators for measuring the impact of tourism and recreation on personal well-being:

Indicator	Notes	Required data	
		Currently available data:	Data to be collected:
Personal economic benefit	To what extent does a resident benefit directly from tourism and recreation, through a job or through income from private rental.		To be measured via resident survey (e.g., via RETS model).
Psychological empowerment (being proud)	The extent to which residents experience a sense of pride due to tourism and recreation.	- Percentage of residents agreeing with the statement: our province is the most beautiful in NL (I&O Research).	To be measured via resident survey (e.g., via RETS model).
Social empowerment (connectedness)	The extent to which residents feel connected to the community due to tourism and recreation.		To be measured via resident survey (e.g. via RETS model).
Political empowerment	The extent to which residents feel they have a say in political choices regarding tourism and recreation.		To be measured via resident survey (e.g., via RETS model).
Broad prosperity*	What is the state of people's lives and well-being?	Broad Prosperity Monitor (personal well-being) Source: CBS	

** cause-effect relationship not known. Presumed, however, that there is a connection with tourism and recreation.*

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Indicators for measuring the impact of tourism and recreation on personal well-being:

Indicator	Notes	Required data	
		Currently available data:	Data to be collected:
Encounters between people	The extent to which the presence of tourists leads to encounters between tourists and residents, and how the effects are perceived.		To be measured via resident survey.
Diversity and inclusion	Contribution to inclusiveness through jobs for people with lower education or a migration background.	- share of jobs by education level Source: Labour market monitor hospitality sector; - Share of jobs by migration background Source: Labour market monitor hospitality sector.	
Social cohesion*	The bond that people have with each other.	- Social cohesion in Liveability Meter Source: Ministry of the Interior and Kingdom Relations; - Citizen survey in participating municipalities* Source: VNG.	To be measured via resident survey.
Impact on local culture	The extent to which tourism and recreation promotes, helps preserve, or detracts from local culture.		To be measured via resident survey.

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Indicators for measuring the impact of tourism and recreation on personal well-being:

Indicator	Notes	Required data	
		Currently available data:	Data to be collected:
Quantity and quality of facilities			
Retail	Number of retail establishments set against population and tourism/ recreational pressure.	- Number of retail establishments in a region (to be acquired via LISA).	
Hospitality	Number of hospitality establishments (excl. lodging) compared with number of inhabitants and tourism/ recreational pressure.	- number of hospitality establishments in a region Source: Labour Market Monitor Hospitality Sector.	
Recreational facilities	Number of recreational facilities set against number of inhabitants and tourism/recreational pressure.	- Number of museums; - Number of amusement parks/ zoos; - Number of cinemas/ theatres; Source: Labour market monitor hospitality sector.	
Events	Number of events.	- Number of events > 5,000 visitors by category and location (paid via Response Events monitor).	
Cycling and hiking trails	Number of cycling and hiking trails.	- Number of kilometres of cycle path per province Source: Cyclists' Union; - Number of kilometres of long distance and regional hiking routes per province Source: Wandelnet.	
Public facilities	Pressure on healthcare facilities*; Pressure on police and fire; services*.		- Number of SEH treatments in the tourist season versus outside the tourist season; - Number of police and fire brigade callouts in the tourist season versus outside of the tourist season.

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Indicators for measuring the impact of tourism and recreation on personal well-being:

Indicator	Notes	Required data	
		Currently available data:	Data to be collected:
Quality of the living environment			
Cultural heritage	Investment in cultural heritage.	- Municipal investment in cultural heritage and museums Source: CBS - National Monument Register Source: National Office for Cultural Heritage.	
Nature, water, and landscape	Investment in nature.	- municipal investments in public green spaces and (outdoor) recreation Source: CBS	
Safety			
Crime*		- number of crimes by municipality and type Source: CBS.	- number of incidents at tourist locations => e.g., by GIS analysis; - number of crimes involving tourists; - number of crimes against tourists.
Vandalism*		- experiencing nuisance from one or more forms of physical degradation, by municipality Source: CBS Safety Monitor; - experience of street vandalism, by municipality Source: Security monitor CBS; - number of vandalism cases per municipality Source: recorded crime CBS.	

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Indicators for measuring the impact of tourism and recreation on personal well-being:

Indicator	Notes	Required data	
		Currently available data:	Data to be collected:
Criminal infiltration	Signs of possible criminal infiltration.	- See dashboard "Visibility into undermining at holiday parks"	
Traffic and parking*	Traffic.	- number of traffic movements on arterial roads and motorways; Source: National Road Traffic Data Portal; - congestion pressure and congestion. severity Source: Rijkswaterstaat.	
	Traffic congestion.	- experienced nuisance from one or more forms of traffic Source: CBS Safety Monitor.	
	Parking pressure.		To be collected from municipalities, some municipalities have already been surveyed.
	Parking nuisance.	- perceived nuisance from parking problems. Source: CBS Safety Monitor.	
Social nuisance*		- experienced nuisance from one or more forms of social nuisance, by municipality. Source: Security monitor CBS	
Nuisance from catering establishments		- perceived nuisance from catering establishments, by municipality. Source: CBS Safety Monitor.	

** cause-effect relationship not known. Presumed, however, that there is a connection with tourism and recreation.*

Good examples

- CELTH published a study on the social value of tourism and recreation in 2021. This includes an overview of indicators, showing each indicator whether people associate with a positive- or negative impact on tourism and recreation.

- HZ Knowledge Centre for Coastal Tourism conducted research in 2019 on the impact of tourism and recreation on facilities in Zeeland and the support for tourism among residents. In 2020, data from these and other surveys were collected by HZ Knowledge Centre for Coastal Tourism in a report on the impact of tourism on Zeeland's society.

- NBTC launched the Residents' Profit programme in 2022. Various collaborating parties are trying to gain more insight into the contribution tourism and recreation can make to residents' well-being.

- The Working Group Focus on Criminal Infiltration - Holiday Parks aims to get to a level of understanding which can contribute to tackling and preventing subversive crime at holiday parks. The dashboard Zicht op Ondermijning - Vakantieparken presents analyses that provide insight into the risk that holiday parks might be used for criminal purposes.

Relevant sources and background information

- Many resident surveys in the Netherlands are based on a scientifically validated model, the Resident Empowerment through Tourism Scale (RETS). This model provides insight into the various factors that determine residents' views on tourism and allows the relationships between these factors to be investigated.

- In his PhD thesis 'When the tourists flew in', Albert Postma conducted extensive research into the patterns of tourist development, the 'critical confrontations' in the relationship between tourism and the local community and how residents deal with these confrontations.

- *One of many* European studies on the impact on tourism also zoomed in on social impact. In its findings, a number of indicators for impact on care and safety were also identified.

Economic impact

What are economic impacts?

Traditionally, economic indicators have been the most important way in which the impact of tourism and recreation is expressed. Tourism policy has mostly focused on growth in tourism and recreation and related increases in spending, turnover, contribution to Gross National Product and employment.

In many cases, it also focuses on the positive economic impact; tourism and recreation are seen as an industry which bring economic growth, employment, and prosperity to destinations. However, the economic impact is not only positive but can also be negative in nature.

Economic impact comes from the spending behaviour of visitors and from the providers who 'serve' these visitors. Visitors spend money when visiting the destination. This flow of money leads to income inside and outside of the tourism/recreation sector. Spending on overnight stays, for instance, can go to commercial accommodation providers (within the tourism/recreation sector) or with private individuals who rent a property via a rental platform (outside of the tourism/recreation sector). When visitors go shopping, this money flows to the retail sector (outside the industry); when visitors eat out, the money goes to the hospitality industry (inside the industry).

All visitor spending can be seen as a direct economic impact: it generates revenue for providers inside or outside the tourism and recreation industry. It directly generates turnover and employment. These providers all have their suppliers: restaurants buy the ingredients for their menu, crockery, furniture, etc. Accommodations are built and furnished, they have linen washed by laundrettes and have waste collected by waste management companies. This is the indirect economic impact, generated by the flow of money from providers who directly receive money from visitors to their suppliers. Ideally, these cash flows will reach as many local entrepreneurs and residents as possible. If there are large companies (international or otherwise) where the revenue ends up, local entrepreneurs and residents benefit to a much lesser extent. This does not benefit support (social support) at the destination.

The economic structure of a destination may change because of tourism and recreation. In a positive sense, tourism/recreation spending creates turnover and employment. Tourism and recreation is therefore often considered as a good source of jobs around the world. However, in a tight labour market, the tourism and recreation sector may be competing with other industries for scarce personnel, and then this reliance on labour is less desirable.

It could also be the case that tourism and recreation will play too big a role at a destination. This would create too much dependence on tourism and recreation, making a destination vulnerable. Should tourism and recreation come under pressure for one reason or another, such as during the Corona pandemic, it will lead to major consequences for the destination's economy and liveability.

The presence of visitors often leads to an increase in amenities, such as shops, restaurants, and activities, which residents can also use.
This can be seen as contributing to an attractive living environment. But when a destination drawsmany visitors, it may lead to price increases, for instance in shops and restaurants. This can also impact residents' wallets. On the other hand, some residents also make money from this. In addition, providers may focus too much on the (perceived) desires of visitors, making the offerings one-sided and

less attractive to residents - although this is not so much an economic impact as it is a social impact. The growth of tourism and recreation can increase the purchase and rental prices of housing, business space and land; with extreme price increases, this can drive residents and local businesses to other locations - a process also known as gentrification.

Tourism and recreation lead to an increase in tax revenue for governments. In a general sense, this involves VAT and sales tax collected by the central government. At the local level, it mainly involves tourist tax (for overnight visitors), commuter tax (for owners of second homes) and entertainment tax (for specific attractions such as amusement parks, tour boats and water taxis, for example). There may also be increased parking revenues, outdoor vendor taxes and such.

Tourist tax, in particular, is a hotly debated topic, as in many cases its revenues end up in general funds. This is often seen as unfair by the tourism/recreation industry; the money paid by tourists should also benefit tourism and recreation. Governments often argue that they also see increased general costs due to tourism and recreation. Internationally, this is referred to as the 'invisible burden' of tourism and recreation: the - mostly invisible - costs incurred by governments in setting up and maintaining public infrastructure (traffic, transport, safety, waste disposal, utilities) and in maintaining and protecting nature and culture. There are several municipalities which expressly use (part of) the revenue tourist tax to improve tourist/recreational facilities. Finally, high tax revenues due to tourism may also have a positive effect on residents; for example, local taxes for residents in the Zeeland municipality of Veere are relatively low because of the high income from tourism taxes in this municipality.

Why is this relevant for balance?

The expected positive economic impact of tourism and recreation is usually the reason why tourism and recreation are promoted for a destination.
However, the economic impact is not only positive, so it is important to look at positive and negative impacts objectively and assess whether they are evenly distributed among different stakeholder groups. Moreover, the economic impact should be weighed against the social and ecological impact and considered with the capacity of the destination.

Application in practice

In past decades, the research focus has mostly been on the positive economic impact of tourism and recreation. There are international standards for measuring the economic value of tourism and these standards have also been embedded in CBS' annual statistics.
In recent decades, a bit more attention has been given to different forms of economic impact, positive and negative. International standards have not yet been developed but there are several studies which can serve as inspiration and several indicators which can be applied have also been developed.

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Common indicators:

Indicator	Notes	Required data	
		Currently available data:	Data to be collected:
Economic importance			
Economic value		- Economic value of tourism for the Netherlands via Satellite account tourism. Source: CBS.	Calculation of economic value of tourism at regional level by CBS or by consulting firms in accordance with national standard KNEITER.
Tourist-recreational spending	Visitor spending: Formula: number of visitors/overnight stays x average spending per night/ day.	- average spending by holidaymakers in the Netherlands. Source: Continuous Holiday Survey (CVO) (up to 2020), NBTC-NIPO Research, from 2021 CBS. (Dashboard Holiday Behaviour of the Dutch); - average spending by foreign guests in the Netherlands. Source: Inbound Tourism Research OIT, NBTC (available Q1 2023); - average spending multi-day domestic business visitor. Source:ContinuZakenreisOnderzoek (CZO) NBTC- NIPO research; - average spending during a visit to a city. Source: Tourist visits to cities, NBTC.	
Tax revenue local	Tourist tax revenue.	- total revenues in millions of euros per province or per COROP region. Source: CBS - revenues in euros per inhabitant per province or per COROP region. Source:CBS - revenues per municipality: via municipal accounts.	

** cause-effect relationship not known. Presumed, however, that there is a connection with tourism and recreation.*

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Commonly used indicators (continued):

Indicator	Notes	Required data	
		Currently available data:	Data to be collected:
	Parking revenue.	- total revenue in millions of euros per province or per COROP region. Source: CBS - revenue in euro per inhabitant per province or per COROP region. Source: CBS - revenues per municipality: via municipal accounts.	
	Entertainment revenue.	- revenues per municipality: via municipal accounts.	
	Commuter tax revenue.	- revenues per municipality: via municipal accounts.	
Employment			
Employment	Size of direct tourism/recreation employment.	- number of jobs/numbers of FTE (full-time equivalent) in the tourism sector in the Netherlands. Source: Satellite Account Tourism CBS - number of jobs and FTE in tourism sector by province and municipality. Source: Labour Market Hospitality Sector.	
	Importance of tourism in total employment.	- share of tourism/recreation jobs compared to total in the Netherlands via Tourism Satellite Account. Source: CBS - share of tourism/recreation jobs compared to total per province and per municipality. Source: Labour Market Hospitality Sector.	
	Labour market tightness.	- Number of vacancies in the hospitality (incl. accommodation) sector in the Netherlands (tension indicator). Source: Labour Market Hospitality Sector.	

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Commonly used indicators (continued):

Indicator	Notes	Required data	
		Currently available data:	Data to be collected:
Supply & companies			
Tourist-recreational businesses		- Number of tourism/recreation businesses, divided by type and size, by province/municipality Source: Labour Market Hospitality Sector.	
Number of properties privately rented			Purchase data through external parties e.g., Airdna.
Number of second homes		- number of objects of commuter tax, to be requested from municipality or the organisation collecting local taxes.	
Occupancy rate		- Occupancy rate overnight accommodations. Source: CBS.	
Development of turnover in tourism and leisure businesses		- dashboard State of destination NL. Source: NBTC	
Negative economic effects			
Property price increases*			To be investigated, example is research on house prices, Airbnb and liveability in Amsterdam by CELTH.
'Invisible' costs in government			To be explored, for example through infrastructure spending, public space management, parking management, waste disposal of destination X to be compared with the same cost types in municipalities of similar size (see CBS).

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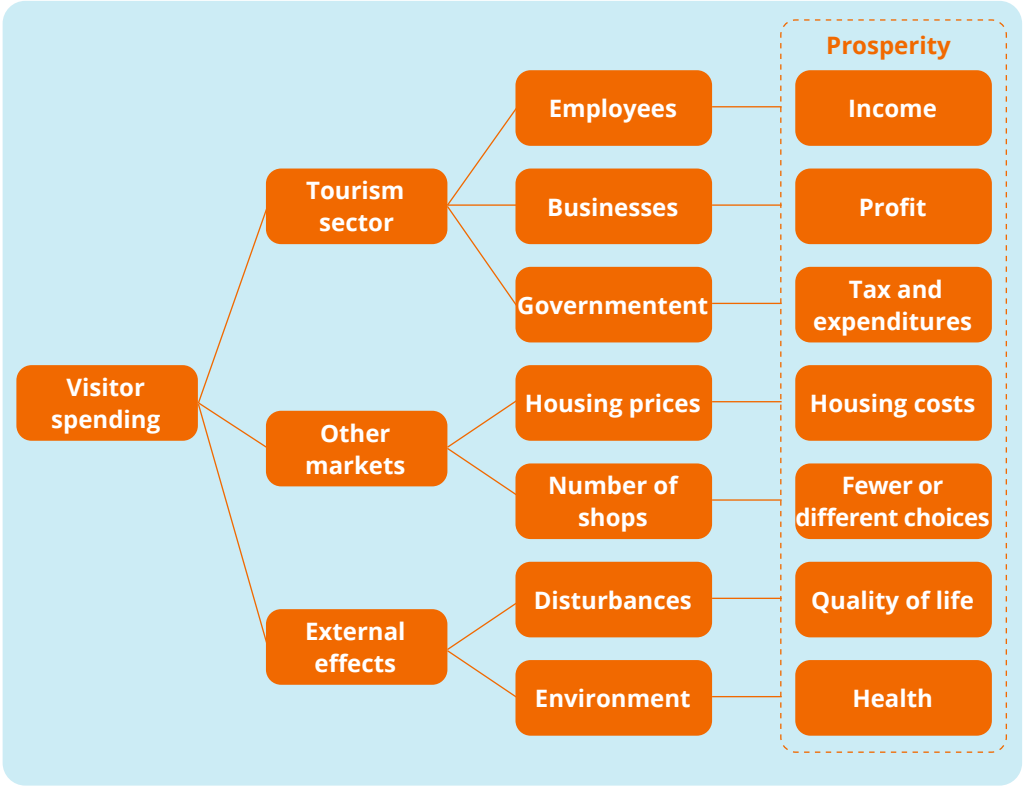
Figure S1:
Visitor spending leads to positive and negative effects.



Good examples

- In 2017, the City of Amsterdam commissioned SEO Economic Research to conduct research into all the impacts of the visitor economy in Amsterdam. This looked at the direct economic effects associated with visitors, but also at the indirect and external effects associated with visitors. Finally, the distribution of the pros and cons of the visitor economy was looked at. The study pays much attention to positive and negative economic impacts, but it also considers external effects on, for example, liveability and the environment. It is one of the most complete studies in the Netherlands on the effects of tourism on a destination and can therefore be considered a good example.

Relevant sources/background information

- Internationally, the 'Tourism Satellite Account ' framework is considered the standard for measuring economic impact. CBS uses this method for The Netherlands and releases these figures annually. CBS has recently applied this method for the first time for the province of Gelderland, to see whether the calculation can also be applied at the provincial level. The findings can be found in the regional tourism report.

- KNEITER, the Knowledge Network Economic Impact Analyses Tourism and Recreation, is a partnership of two universities of applied sciences (Breda University of Applied Sciences and HZ University of Applied Sciences), four consulting firms (Bureau Buiten, Decisio, Ginder and Markteffect) and the Mulier Institute. The KNEITER network has developed a guideline for economic impact analyses in tourism and recreation. This guideline clarifies the minimum quality requirements that an economic impact analysis must meet, in terms of data sources to be used, definitions/demarcations and methods.

Ecological capacity

What is ecological capacity?

Ecological capacity represents the tourism/recreation pressure that a destination can absorb without causing irreparable damage to the natural environment. Determining this capacity specifically for tourism and recreation is complex, as the natural environment is influenced by many uses sources such as traffic, industry, and agriculture.

Therefore, causes of 'damage' cannot always directly be related to tourism and recreation.
Moreover, the impacts of tourism and recreation depend heavily on the nature of tourism use in time and space, and capacity cannot be expressed in a maximum number. A widely used method is to create frameworks for a sustainable form of tourism and recreation in the 'Limits of Acceptable Change' model. The underlying idea is that tourism and recreation almost always lead to impacts and changes in the natural environment. Nevertheless, many parties do want to facilitate a certain level of recreation, as this can contribute to the health (mental and physical) and awareness of visitors and generate revenue for the preservation and enhancement of the natural environment. The 'Limits of Acceptable Change' philosophy, therefore, seeks to find an optimum, a compromise between two opposing goals: protecting natural values and facilitating visitors. Effective measures are established by the creation of an analysis of the area (both ecological and tourism/recreation) and determining the desired goals for both. To this end, different zones are often distinguished in an area, based on ecological values and the spatial distribution of recreation and tourism (recreational zoning). The *acceptable* compromise is determined by the involved stakeholders.

The Alterra study articulated this in the following roadmap.

1. Drawing up a communication plan
   Visualise all interest groups: not only conservation organisations and recreational operators but also farmers, residents, policymakers, etc. Determine a transparent communication strategy suitable to properly engage all these interest groups.

2. Setting environmental and recreation targets
   a. Setting environmental targets: environmental targets usually relate to the conservation of habitat types and species of flora and fauna. These objectives are taken from the European Birds and Habitats Directive (Natura 2000), the Water Framework Directive and/or the National Ecological Network (EHS). These are legally enforceable goals, In addition, there may be environmental ambitions. The environmental goals must be sufficiently clear to all the aforementioned interest groups.
   b. Establish recreation goals: recreation goals and ambitions should also be mapped as clearly as possible. The scope for further recreational development and the feasibility of the recreational goals can be included in the next steps.

3. Analysis of the current nature and recreation situation
   a. Analysis of the current state of nature targets: an analysis of the local state of conservation should take place for the habitat types and species of flora and fauna concerned. Ideally, this information is available based on the monitoring of existing management plans. The analysis shows whether the nature targets in the current situation are already being achieved and whether there is a positive- or negative trend.
   b. Analysis of current and desired recreational use: gaining insight into the current recreational use of an area. This involves spatial use (which parts are/are not accessible), temporal use (during the 24hours and seasons) and recreational intensity.

4. Analysis of opportunities and bottlenecks
   By comparing the information from steps two and three (preferably on GIS maps), the ecological bottlenecks, on the one hand, and development space for recreation on the other hand are revealed. This shows the ecological capacity!
   The use of development space in some areas involves many stakeholders. The roadmap as described here calls for a multitude of knowledge about ecology, recreation, and other factors, but most of all it requires knowledge about the interaction between them. It is precisely this interaction, and whether it is acceptable, that often leads to debate in practice.

5. Development of a management and redevelopment plan. The primary focus of this plan is to achieve environmental goals, but also on facilities and informational needs to facilitate (or restrict) the desired degree and nature of recreation.
   The management of an area must also be designed accordingly: what level of enforcement and supervision is needed to prevent unwanted impact, and is this possible? This can partly determine the level of visitor traffic an area can facilitate.

6. Monitoring and trend analysis
   Finally, indicators should be chosen which can be used to measure the situation. It is important to choose a limited number of indicators, which can be easily tracked. Above all, the indicators should show whether changes in natural values are within acceptable limits. For example, consider the status of crucial species of flora and fauna and the changes therein. If the accepted limits are exceeded or there is a negative trend, then explicit action should be taken to protect natural values. The indicators should also show whether visitor intensity and visitors' experiences are in line with the desired situation.

The above shows that universal indicators cannot be chosen for all areas. This depends on specific area characteristics and environmental goals and should be determined by the stakeholders together.

Note: incidentally, ecological capacity in a broader perspective cannot be separated from the climate targets set by The Netherlands and Europe. Tourism and recreation must also contribute to this and will therefore have to work to minimise CO2 emissions, waste, water consumption, etc.

Why is this important to achieve balance?

The experience of nature and landscape are among the main reasons for visiting a destination, for tourists, but also for recreation by the residents. But nature and landscape in particular are often vulnerable to the impact of these visits. These ecological impacts have been described in detail earlier in this report.
If the impact on nature and landscape exceeds the ecological capacity, this is first of all very bad from the perspective of nature management and biodiversity. However, it also affects the tourist/recreational value of the destination; visitors will stay away if the experience of nature and landscape is no longer possible. It is therefore of great importance to attention to the ecological capacity of destinations.

Application in practice

The subject is complex because ecological capacity varies between biotopes and landscape types. As mentioned in the introduction, the natural environment is under the influence by many uses - next to tourism and recreation, for example, traffic, industry, and agriculture. Causes of 'damage' cannot therefore always be related directly to tourism and recreation. It is therefore not easily possible to express capacity in a maximum number of visitors. The rationale of 'Limits of Acceptable Change' / recreation zoning is a more practical approach, which seeks to find an optimum between two opposing goals: protecting natural values as well as facilitating visitors. The acceptable compromise is determined by the stakeholders involved.

Common indicators

A standard list of indicators is not directly applicable given the above. It is recommended to go through the aforementioned roadmap in coordination with all stakeholders. Indicators which are are relevant, stem from the environmental goals which apply in the area in question and which are laid down in nature management plans.

Good examples

- For the Veluwe, the Veluwe Recreational Zoning Plan was drawn up in collaboration with landowners, authorities, residents, users (recreational visitors), nature organisations and (recreation) entrepreneurs. The starting point for zoning is reaching the Natura 2000 targets. One of these is to restore the populations of seven disturbance-sensitive bird species. If these populations recover, it is a good measure of recovery for many other species. An important principle in the Recreation Zoning Plan is to entice and guide recreational visitors: residents, business owners, user groups and tourists. To provide the necessary tranquillity for nature while allowing recreational visitors to enjoy it to the full. Therefore, in making the plan, existing recreational routes, residential zones, hospitality, infrastructure, and holiday parks are taken into account.
- North Holland is experiencing rapid growth and changing recreational pressure. Current nature and recreation areas do not have infinite capacity to accommodate this growth and the capacity of nature does not allow increased recreation in all areas. A cross-regional study was therefore carried out into the 'functioning' of the areas (supply) in relation to the development of demand.
  How do the areas relate to each other, can recreational use be optimised and what are the future cross-area challenges? A supra-regional analysis and an area-level analysis have been made.
- National Park South-Kennemerland's Sustainable Tourism Vision describes how it aims to combine fragile nature with the increase in tourism and recreation.

Relevant sources and background information

- The thinking behind the 'Limits of Acceptable Change' model is described in the publication 'The Limits of Acceptable Change (LAC) system for wilderness planning' by Stankey et al (1985).
- Alterra conducted a comprehensive study on recreation and nature in Natura 2000 areas and concludes with the roadmap described in this chapter.

Social capacity

What is social capacity?

Social capacity represents the maximum extent of tourism and recreation (in terms of numbers and activities) at a destination without residents developing negative feelings towards this tourism and recreation.

Social capacity refers to the attitude and tolerance of residents towards (the development of) tourism and recreation. When the impact of tourism and recreation, socially, ecologically, or economically, exceeds this capacity, a negative or even hostile attitude towards tourism and recreation may arise. This can harm tourism and recreation - both the visitor experience and the business operations of tourism/recreation providers.

Social capacity is one of the most difficult components of capacity to evaluate compared to, for example, ecological, psychological, and economic capacity. It relies entirely on value judgements and perceptions, which makes it quite complex. Residents living on the same street, for example, may both have different perceptions of tourism and recreation. Social capacity is not a scientific concept or formula resulting in an exact number, indicating the maximum number of visitors.

From theory, social capacity often develops with time and the growth of tourism and recreation. The underlying assumption is that residents' quality of life will improve during the initial phase of tourism and recreation development until the destination reaches its maximum capacity.
From then on, any further development will lead to a negative perception. However, other studies have shown that this does not always have to be the case. Perceptions can remain the same for years or, on the contrary, vary enormously between different populations.

Partly for this reason, it is important to continuously monitor and measure social capacity. It is a useful management process to ensure that tourism and recreation development remains within optimal levels. This ensures the long-term sustainable development of tourism and recreation.

Why is this important to achieve balance?

Social capacity is very important in the whole balance discussion. It provides an understanding of the limits of residents regarding visitors. If this limit is exceeded, it can affect the quality of life of residents. It is also important to maintain the quality of the visitor experience. At a thriving destination, both the experience of the guest, but also the place itself, its uniqueness, its hosts, and its inhabitants are monitored.

In practice

With the development of appropriate socio-psychological research techniques, it is possible to develop reliable evaluation standards. Questionnaires, public surveys and interviews are some of the key research methods to gain valuable insights.

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This is a printed version of the online publication. Links to source files, relevant publications and partner websites are provided in the online publication only.

Common indicators:

Indicator	Notes	Required data	
		Currently available data:	Data to be collected:
Support for tourism	Some measurable statements: - the advantages of tourism in my municipality outweigh the disadvantages; - I think tourism should be actively encouraged in my municipality; - I support tourism and I want it to remain important in my municipality; - my municipality must remain a tourist destination; - due to tourism, my municipality is becoming too crowded; - a growth in the number of tourists will cause friction between residents and tourists.		To be measured via resident survey (e.g., via RETS model).

Good examples

- To understand residents' attitudes towards tourism, a resident survey can be conducted. The "Resident Empowerment through Tourism Scale (RETS) is a validated method that provides insight into the various aspects which determine residents' views on tourism. The following destinations have already conducted a resident survey, in many cases largely based on the RETS method.
- South of Limburg 2018
- Zeeland 2019
- Texel 2020
- Hanseatic Cities 2020
- Goeree-Overflakkee 2021
- Schouwen-Duiveland 2021
- Veluwe (2021)

Related studies are:

- Research on tourism capacity and liveability of neighbourhoods in Amsterdam, 2019
- HZ Knowledge Centre for Coastal Tourism compared the results of the Zeeland residents' survey with as much information as possible on the impact of tourism. This is an attempt to bring subjective and objective information together; "Tourism in Zeeland, an exploration of the impact of tourism on Zeeland's society".
- Through interviews with a large number of representatives from other sectors, HZ Knowledge Centre for Coastal Tourism has captured the impact of tourism on quality of life, such as healthcare, transport, safety and more.

Relevant sources and background information

- The scientific base of the resident surveys in the Netherlands is formed by the "Resident Empowerment through Tourism Scale", developed by US researchers.
- The chapter 'Community perceptions of tourism impact' in the 'Handbook of tourism impact - social and environmental perspectives' identifies many more relevant perspectives and background articles. The book may be ordered here.

Psychological capacity

What is psychological capacity?

With psychological capacity, we look at the experience and perception of visitors or tourists during their stay at the location. And then specifically the extent to which they experience the location as being 'too busy'. So, you then look at the issue from the perspective of the visitor and his or her perception of crowding.

The question then is; at what point is the visitor's perception of crowding acceptable, without negatively affecting the quality of the visitor experience? It is about the feeling of the visitors, about the experienced crowds in relation to the location.

Why is this important to achieve balance?

When translating balance into capacity (a location's limits), a lot of attention is often paid to the physical capacity of an area. The pressure that user groups place on a site and the extent to which this may or may not have a negative effect on the physical characteristics of the location. When we talk about balance, we are looking for an optimal point where visitors, residents and businesses flourish without negatively ***affecting*** the physical location. The visitor's perception should therefore be an integral part of this analysis. When the experience is negative, this has, among other things, a negative effect on (future) visitor behaviour of the person himself, but also of his friends and acquaintances with whom it is shared, which logically in turn has a negative effect on the (revenue of) businesses in that location. And without residents providing the location with its character, the experience for visitors is not the same.

Application in practice

The most common method to gain insight into visitor experience is to survey visitor satisfaction through visitor surveys. This can be done among visitors from outside the region as well as residents of the area. In (online) surveys, visitors can be asked after a visit how they experienced the visit. This can take the form of, for example a report grade or a satisfaction scale (from very dissatisfied to very satisfied). By conducting this survey regularly (or continuously), the development of satisfaction can be monitored. Additionally, one can choose to add a recommendation question to the survey, the so-called Net Promoter Score (NPS). This is because the extent to which people recommend visiting an area to friends and acquaintances is a good indicator of how satisfied they are with the area. After all, you generally do not recommend it to someone else if you did not like it yourself.

A survey of visitors could also delve deeper into the experienced crowds by including specific questions about it. As was done in NBTC's Coastal Monitor (2019). This survey asked about the experience of crowds during a visit to the coast, the extent to which it was busier or quieter than expected and to what extent this affected the visit positively or negatively. Because the fact that one place is physically busier than another does not necessarily mean that the experience is more negative in the busier place than in the quiet place. In a city centre, people expect 'some bustle', while the same bustle in a nature reserve can feel like too much.

With either method, though, you are not interviewing visitors who have already made an a priori choice not to visit an area because of the crowds in that area.

In addition, it is very common these days to leave a rating (or *review*) online after visiting a place. This can be an area, but also an accommodation, restaurant, or attraction. These reviews are shared through the providers' sites, but also through specific review sites such as Zoover, Tripadvisor and Google Reviews. By reviewing and possibly scraping data from such websites, insights may be gained into the average rating of a place and its development. This technique can also be used for a more specific analysis within the review data, for example, the extent to which people talk about crowds in a certain location. Several market players offer datasets and dashboards, which include assessment data obtained through web scraping. This can provide insight into average assessment scores by region and category. However, certain sites may sometimes block web scrapers.

A more indirect indicator of satisfaction can be found in repeat visits, from the assumption that people do not visit a destination again if they are not satisfied with it. Repeat visits can also be monitored through surveys by asking whether people have visited the site before. Here it depends on the policy goals which period is used for this. Should people have visited it once in the past few years, in the past month, week or even day? Several new (big) data sources have the potential to also provide insights into repeat visitors, such as data based on WiFi trackers and geolocation trackers from apps on mobile phones. Through encrypted codes, specific phones are tracked through time, revealing visitor patterns. Through analyses of length of stay and travel patterns, residents and visitors are defined and therefore something can be inferred about repeat visits. Currently, this technology is in its infancy though.

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Common indicators:

Indicator	Notes	Required data	
		Currently available data:	Data to be collected:
Visitor satisfaction	Degree to which visitors are satisfied with their visit to a location.		measured through visitor surveys (through satisfaction or recommendation questions in a visitor questionnaire).
Experienced crowds	Extent to which people experienced crowding during their visit.	- Crowd perception in coastal areas. Source: Coastal Monitor NBTC, 2019; - Crowd perception by province. Source: Inbound Tourism Research, NBTC (end Q1 2023).	To be measured through visitor research.
Ratings/reviews of a place	Understanding (development of) online reviews.	- Google review data (Google, Zoover, Tripadvisor etc.) various market players offer web-scraping options.	
Repeat visit	Extent to which people return to the same destination within a given time.		To be measured via visitor research (have you visited the destination before?) or find out via GPS tracking.

Good examples

- The Data and Development Lab released a study on crowding in 2022, which used simulated 360-degree crowd images and measured brain activity when seeing those images to investigate the effect of crowding on people's perception. That research concludes that there is an optimal level of crowding that tourists prefer. Tourists find both empty and full streets and squares less pleasant. Also, tourists are guided by crowding information and are willing to pay for optimal crowding.
- Wageningen University carried out a study on crowd perception in green spaces. An experimental study was conducted which looked at the extent to which crowd perception depends on actual visitor pressure and what other factors play a role.

Physical capacity

What is physical capacity?

The physical capacity of a destination or location is the maximum level of human use of that site, without unacceptably affecting the location. In a general sense, this includes infrastructure and utilities such as water, energy, etc.

From a narrower perspective, the maximum physical capacity could also be determined based on the maximum limits of the available (tourist/recreational) facilities and infrastructure at a location. Consider the available parking capacity and the maximum capacity of an accommodation or attraction. Based on the idea that 'full is full', a place should be able to host visitors if this maximum capacity is not exceeded. It is then of course important that for developing those facilities its impact on the surrounding area, local community and visitor experience is considered. An example: somewhere near a nature reserve there is physical space for the development of 500 parking spaces, this does not mean that hosting so many cars and visitors is positive for the nature reserve and the visitor experience.

Looking at utilities, the Netherlands seems to have water and electricity in abundance. Yet there are increasing reports showing that these resources are not infinite. In 2022, for example, there temporarily was too little capacity on the power grid in the southern part of The Netherlands to connect new businesses. The demand for power at that time was higher than the capacity. With the energy transition in full swing, tourism/recreation businesses are also expected to increasingly use electricity, for example, to take accommodations off natural gas or to charge their guests', visitors' and staff's electric vehicles.

The summer of 2022 was particularly dry and this was particularly noticeable in agriculture and shipping. The drinking water supply did not experience any problems. Nevertheless, in September 2022, the Association of Water Companies Vewin expressed concerns about the future of Physical capacity our drinking water. Due to population growth and economic growth, more and more drinking water is needed, and the production capacity of water companies is not sufficient to meet this demand.

Tourist/recreational development may therefore put (even) more pressure on these utilities. This need not be a problem for all destinations, but it could certainly be an issue.

Why is this important to achieve balance?

Physical capacity is often considered one of the more measurable frameworks within the balance issue. There are generally clear limits to the available capacity of a tourist/recreational facility, such as attractions, accommodations, parking spaces, etc. The physical space allows a maximum number of visitors. At destination level, with many different facilities and infrastructure, this can be more complicated. After all, which is leading: the capacity of general infrastructure or the capacity of individual facilities? It is important to look at this in context: the combined capacity of individual facilities in relation to the capacity of general infrastructure and utilities.

In practice

There are several indicators which provide insight into the available capacity of a place based on available facilities. In the case of infrastructure, things like public transport capacity, parking pressure and congestion may also be considered. In the case of utilities, the capacity of the power grid and the production capacity of drinking water companies can be considered.

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Common indicators:

Indicator	Notes	Required data	
		Currently available data:	Data to be collected:
Accommodation/ sleeping capacity		- Accommodation/sleeping capacity. Source: CBS.	
Infrastructure	Road network capacity.	- Overview of road network in The Netherlands. Source: Nationaal wegenbestand, NDW.	
	Parking capacity.	- Open data parking. Source: road service.	
	Public transport capacity.		To be requested from regional public transport providers.
	Walkability of an area = the physical space for pedestrians.		To be collected, see Amsterdam example.
Utilities	Water.		Any bottleneck in production capacity of drinking water, to be requested from water company.
	Electricity.	- Grid capacity map. Source: Tennet.	

** cause-effect relationship not known. Presumed, however, that there is a connection with tourism and recreation.*

Good examples

- Since the late 1980s, several studies on the limits of tourist growth and the optimal mix of visitors have been carried out in European cities based on a model by Costa and Van der Borg (1988). Recently, a study based on this same model was conducted by KU Leuven on the tourist capacity of Giethoorn, Kinderdijk and Zaanse Schans. This also included the physical capacity of the area. In this study, however, the model was expanded to include quantitative and qualitative data from the visitors themselves and impressions from public and private parties involved in the tourism development processes at the locations concerned. The Tourist capacity analysis is available.
- The municipality of Amsterdam has conducted research into the 'walkability' of the city. The map digitally mapped as many obstacles as possible and combined them with available width and crowd information. The walkability score is different per street for different target groups because the function of a street differs for each target group. Only obstacles known to the municipality (such as licensed outdoor seating areas, street furniture, etc.) are included.

Economic strength

What is economic capacity?

Economic capacity is about the extent to which a destination's economy is changed by tourism and recreation. Macroeconomically, it is important that areas are not dependent on one or only a few industries.

After all, should such an industry fall in hard times due to unforeseen circumstances, it will have a major impact on the regional economy. This also applies to destinations which rely heavily on tourism and recreation. During the Corona pandemic, it turned out that a major decline in tourism and recreation (temporarily) led to major consequences for the economy and the quality of life in these destinations.

Economic dependency does not only play out at the macroeconomic level but is also relevant within the tourism/recreation sector. If a destination depends on one type of guest or one country of origin, then that makes the destination vulnerable to external influences. This was also visible during the Corona pandemic: international travel restrictions had huge implications for destinations that attract mostly foreign visitors. Destinations which managed to attract many domestic visitors suffered much less from the impact of anti-Corona measures. Diversification - the extent to which different markets and target groups are reached - is therefore very important. Such diversification may relate to the demand side of the market: countries of origin, business or tourist visitors, age groups or lifestyles (different types of motives for holidays and leisure, e.g., adventure seekers vs. those who seek rest). Diversification can also relate to the type of supply. Consider the supply of accommodation: if a destination has only campsites, then the weather dependence is greater, and it is much harder to attract guests in winter. And if a destination only offers five-star hotels, then it will rely more on the business market.

Why is this important to achieve balance?

With too much economic dependence on tourism and recreation, there is a greater risk of losing sight of the balance between pressure and capacity. After all, tourism and recreation are then of such importance for businesses and employment that other interests could be subordinated.

In practice

Several indicators are available from existing data, which provide insight into the economic dependence of tourism and recreation on a destination as well as diversification within tourism and recreation.

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Common indicators:

Indicator	Notes	Required data	
		Currently available data:	Data to be collected:
Economic dependence	Share of tourism and recreation in employment.	- Number of jobs in hospitality sector, by municipality. Source: Labour Market Monitor Hospitality Sector; Divide by total number of jobs. Source: Labour Market Monitor Hospitality Sector	
	Economic importance tourism and recreation.	- Share of tourism in Gross Domestic Product, Netherlands (via dashboard Staat van Bestemming Nederland).	
Market diversification	Diversification in the number of countries of origin.	- Share of three main countries of origin, by province(via dashboard Staat van Bestemming Nederland), zie database).	
	Share of corporate market.	- number of business overnight stays in hotels, by province and for major cities. Source: CBS; divisible by total overnight stays in hotels. Source: CBS.	
	Diversifying lifestyle segments.		Analyse guests according to lifestyle segmentation Source: Market response.
Product diversification	Diversification of accommodation on offer.	- Distribution of accommodation, hotels, camping sites, cottage sites, group accommodation; by province. Source: CBS.	Analysis supply according to lifestyle segmentation.
	Diversity in hotel offerings.	- Distribution of hotels by size and star ratings. Source: CBS.	

Good examples

- MarketingOost conducted several studies on the Overijssel leisure economy in recent years. This provided a lot of knowledge about the tourist facilities on offer and, for example, visitor profiles. That data is made accessible via the Opportunities Map, which shows which (combinations of) locations, market segments and types of businesses are promising in the region in the coming decades.
- Limburg Marketing developed the Visitor Datatool, based on the market segmentation of the Life Style Finder. Partners of Limburg Marketing can use this tool to gain insight into their current visitor groups and get inspiration on how to reach other visitor groups.

Political strength

What is political strength?

In academic literature, political capacity is defined in different ways.

In one commonly used description, political capacity is the extent to which the government succeeds in updating tourism policies at a destination based on measured tourism/recreation impacts in relation to all forms of capacity.

For instance, more and more destinations in the Netherlands have made a regionalised version of Perspective 2030. Another common description states that political capacity is about the maximum extent of tourism and recreation where political instability does not arise, such as corruption, conflicts over land use and spatial planning or conflicts over tourism and recreation revenues. These conflicts may be reflected, for example, in political decision-making and possible appeal procedures.

Why is this important to achieve balance?

In the context of the philosophy of 'Valuable tourism is to work on balanced tourism', the former description, in particular, fits well. After all, working on tourism in balance implies that impact is monitored and impact versus the destination's capacity is evaluated. And, also, that (tourism) policies are adjusted based on the outcomes.

The participation of different stakeholder groups determines support for the policy. Opportunities for participation and involvement are important here. It could be argued that reports of disturbances, (organised) protests, petitions, letters of complaints, appeal procedures - whether or not resulting in a trip to court -, etc. are an expression of insufficient support and thus perhaps a signal of imbalance.

In practice

The issues involved in political support Political strength are not easily expressed in measurable indicators. However, there is a wide range of topics that should be addressed in the tourism policy cycle:

- Tourism policy updates
  Is the tourism policy reviewed regularly based on impact analysis?
- Number of FTE available in government for the tourism domain
  How much official capacity is available within a destination for the tourism domain? Is this commensurate with the impact of tourism on the destination?
- Presence of data on tourism and recreation. Is there any research on the impact of tourism and recreation? Is there data on the capacity of the destination?
- Encourage positive impact tourism and recreation.
  What tools (rules/government budget) are available to encourage positive impact/sustainability of tourism and recreation?
- Countering negative impact of tourism and recreation.
  What tools (rules/government budget) are available for countering negative impact of tourism and recreation?

- Permits in relation to capacity.
  How many and which licences have been granted for tourism activities?
  Are all permits used or is there unused planning capacity? Is it appropriate to withdraw this unused capacity?
- Stakeholders in tourism and recreation policymaking.
  How many and which stakeholders are involved in tourism and recreation policymaking? Is this a good representation of all relevant stakeholders?
- Number of appeals related to tourism policy and/or tourism/recreation initiatives.
  How many appeals are filed annually against tourism/recreation initiatives or tourism/recreation policies? Can these appeals be dealt with independently or do they lead to litigation?
- Policy on tourist tax.
  What is the policy on tourist tax? What are rates based on? What are the revenues spent on? Is this information provided to residents and stakeholders from the tourism/recreation domain?

Good examples

- Province of Drenthe, Marketing Drenthe and Recreation Drenthe published Perspectief Drenthe 2030 in early 2021. The piece was developed together with the industry. More than 200 entrepreneurs and organisations were involved. Matching the national "Perspective Destination Netherlands 2030" and Drenthe developments, the Perspective is committed to valuable tourism and recreation for residents, visitors, and businesses. The ambition is for every resident of Drenthe to benefit from tourism and recreation, where we look to sustain the destination Drenthe. A balance between visitors, businesses, residents, and destination Drenthe is the starting point, or in other words a balance between economy, liveability, and environmental qualities.

- The Smart CITy HOSpitality (SCITHOS) project developed a serious game to support policymakers in making tourism policies in cities. The game, consisting of a board game, shows the consequences of certain policy choices, for example on tourist behaviour and its impact on the city. The board game is supported by a simulation model which also offers literal insights. More information can be found here (via online publication).

Expert review

The previous chapters have described the perspectives from which impact and capacity can be studied. Where possible, indicators and data sources have been identified to measure this. Currently, however, not all perspectives are easily measurable because it is difficult to determine good indicators or because data sources are lacking.

But even when the data is available, it is important to **value and interpret** it properly. Universal indicators have been chosen, but there are no universal limits. This is because these depend on the specific context at a destination. Consider, for instance, the type of destination (e.g. city / coastal/rural), nature of the tourism product, nature of tourist visits, stage of tourism development and population composition. However, even within a specific context, it is impractical to determine exact limits.

Therefore, the urgent advice is always to start and conclude a tourism balance study with a working session with experts who can offer different perspectives. Suggestions for experts can be found in the table at the end of this chapter. In such a working session, the available data is put together and assessed, looking at the specific context of the destination.

The assessment is emphatically not about looking for maximum numbers or determining exact limits, but about an optimum. Several angles are important here:

- the positive impact of tourism and recreation should outweigh the negative impact;
- the impact should be shared equally among stakeholders;
- tourism/recreational pressure and the resulting impact should fit the capacity of the destination, both by subtopic and in its entirety.

All these perspectives are important for the assessment. Based on the knowledge of their field, the experts jointly determine whether the score is green, orange or red. Together, the experts also determine a hierarchy with regard to the subtopics; which type of impact or what type of capacity is most important at this destination? In this way, a picture is created of the areas of concern when it comes to the tourism/recreation balance at a destination.

Step-by-step investigation of balance

- **See tourism/recreation balance as a conversation model**
  Make sure you have connected with the right people from different perspectives. At the start of a study on tourism/recreation balance, organise a working session to select indicators for the destination together.

- **Joint analysis of data**
  For the selected indicators, data are gathered or collected specifically for this purpose. The results of the research form the basis for a working session with experts from different perspectives. Together, the available data is brought together and assessed, looking at the specific context of the destination. It is an assessment by experts, who together determine whether the score is green, orange, or red based on the knowledge of their own field of expertise. The experts also determine a hierarchy with regard to the subtopics;

which type of impact of impact or what type of capacity is most important at this destination?

- **Use research to help raise awareness**
  Based on the research results, but especially on the assessment by experts, it becomes clear what points of interest there are when it comes to the tourism/recreation balance at a destination.
  These focal points are important for all stakeholders in the tourism/recreation domain: parties in and outside the tourism/recreation sector and within the government. Officials and administrators as well as elected officials.
- **Use research to future-proof choices**
  The focus areas resulting from the research are an important starting point for determining or adjusting future-proof tourism and recreation policy. Guidance on how analysis and research fit into the entire policy cycle can be found in the Guideline on Zoning Management and, more specifically for nature areas, in the National Parks Bureau's Guideline on National Parks.

Suggestions for experts by angle

Nature and landscape.	land management organisations, nature & landscape research groups at universities (e.g. Wageningen Environmental Research), water boards, national parks, nature and environmental organisations.
Social.	research parties in the social domain, such as socio-economic knowledge centre Neimed, Frisian Social Planning Agency, Social Planning Agency Groningen, Trend Agency Drenthe and HZ Knowledge Centre Zeeland Society.
Economic.	Research parties in the Economic domain.
Tourist.	recreation boards, DMOs, industry associations such as HISWA-RECRON, Koninklijke Horeca Nederland, Stichting Groepsaccommodaties Nederland, VEKABO, Stichting Vrije Recreatie, BBZ, etc.
Residents.	village associations, district councils, village interest associations.
Integrated tourism policy.	CELTH (agenda conscious destinations), ETFI (strategic foresight and scenario planning, governance issues, resilience, and adaptability).

Creation of publication

This publication is the result of the project ' Valuable tourism is to work on balance'. This is a project of HZ University of Applied Sciences, Breda University of Applied Sciences and NHL Stenden University of Applied Sciences - collaborating in the Centre of Expertise Leisure Tourism & Hospitality (CELTH), with The Netherlands Board of Tourism and Conventions (NBTC) and Saxion University of Applied Sciences. The project was also made possible by the Data & Development Lab of NBTC, CELTH and CBS.

The original idea of creating an overview of the most useful methods, from which parties could select the most suitable method for their balance question, turned out not to be feasible. Gradually, it turned out that none of the methods examined both impact and capacity. Each method dealt with one side of the scale, while balance only becomes visible when you look at both sides. It was therefore decided at the end of the project to start from the information needs and identify ways in which the various subtopics within balance can be measured.

The approach taken can be represented as follows:

Establishing criteria	• explore literature in relation to balance and collect practical examples; • 12 interviews and stakeholder working sessions to determine information needs, relevant policy questions and inventory what is already being measured on the balance topic. • In-depth literature review: some 100 publications and methods from The Netherlands and abroad. See appendix.
Selecting relevant research methods	• established key criteria for determining the appropriate research method(s) to measure balance.
Thorough exploration of selected research methods	• Describe precise approach per method, advantages and disadvantages, and utility value in The Netherlands; • comparing used indicators • **none of the methods measure the entire balance issue, often a component/ element of balance.**
Compiling reports for the field	• describe the different subtopics within balance; • Identify good practice examples, relevant indicators and available data.

Colophon

The creation of this publication was made possible by:

- Diana Korteweg Maris, HZ Knowledge Centre for Coastal Tourism / CELTH
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- Ondrej Mitas, Breda University of Applied Sciences / CELTH
- Peter Steenhuis, Saxion University of Applied Sciences

NBTC
Prinses Catharina-Amaliastraat 5
2496 XD The Hague

070 3705 705
nbtc@holland.com
www.holland.com

NBTC
Nederlands Bureau voor Toerisme & Congressen

Centraal Bureau voor de Statistiek

CELTH Centre of Expertise leisure, tourism & hospitality