9 RECREATION AND TOURISM AT SEA

9.1 LEGISLATIVE FRAMEWORK

9.1.1 Spatial delimitation

Competent authority

General:
- Ministry of Social Affairs, Public health and Environment
- Ministry of Flemish government, competent for Agricultural affairs

Water-ski:
- Ministry of Transportation and Infrastructure, Directorate Maritime Affairs and Shipping, Shipping policy
- Ministry of Flemish government, Department of Environment and Infrastructure, Waterways and Maritime Affairs Administration, Unit Coastal waterways

Water scooters and jet ski:
- Ministry of Transportation and Infrastructure, Directorate Maritime Affairs and Shipping

Legislation

(Cliquet et al. 2004; Maes and Cliquet 2005)

International legislation:

National legislation:
- Royal Decree of 4 August 1981 concerning a Police and Shipping Regulation for the Belgian territorial sea, the ports and beaches of the Belgian coast, BS 1 September 1981, as amended.
  - Competitions are forbidden in the Belgian territorial sea and in the marinas of the Belgian coast, except where a license has been obtained (art. 38, § 1 en 2). Along the beaches of the Belgian coast no vessel can depart into the sea unless departing from the places indicated by officials of the Waterways and Maritime Affairs Administration and within the limits determined by them (art. 39, § 1). A vessel can only come within 200 metres of a beach in the case of force majeure (art. 39, § 2).
- It is forbidden to fish in the fairways of the marinas and on the roads of those marinas. Fishing with square fishing nets or with fishing rods from the coastal defense structures of marinas is permitted where it does not disturb navigation (art. 10, §11). Article 40 settles fishery on the beaches.

- Nobody may, voluntarily nor involuntarily, endanger the safety of navigation or slow down this navigation by negligence or incapacity.

- Competitions are forbidden in the Belgian territorial sea and in the marinas of the Belgian coast, except for those having a license (art. 38, §1 and 2). Along the beaches of the Belgian coast no vessel can depart into the sea unless departing from the places indicated by officials of Waterways and Maritime Affairs Administration and within the limits determined by them (art. 39, §1). A vessel can only come within 200 metres of the beach in the case of superior power (art. 39, §2).

- Pleasure crafts (a.o. kayaks) with a total length of $\leq 6$ m, are prohibited to launch into sea with an offshore wind of $\geq 4$ beaufort or an on-shore wind of 3 beaufort.

- Surfboards are prohibited to launch into sea when the wind blows 7 beaufort or more. Windsurfing is prohibited between sundown and sunrise (art. 37 bis). The practising of windsurfing is forbidden in the harbours of the Belgian coast (art. 38, §2). Surfboards cannot remove themselves more then half a sea mile from the coast (art.19, §1).

- The law regulating the maximum wind speed allowed for windsurfing initially caused problems of a practical nature. However, the law was recently changed and it now allows windsurfing up to a wind speed of 8 beaufort if the wind is offshore. The problem is that the responsibility was put on the several water sports associations. There is, however, no possibility to launch a rescue boat into the sea at a wind speed of 6 beaufort or above. The proposition is therefore to let the windsurfers practise their sport on their own risk, which also exists for sailing. The clubs can then decide themselves when they can’t guaranty safety any longer and communicate this to their members (red flag). Whoever surfs during these times does so at their own risk, and the costs of any rescue will be imposed on that individual.

- In virtue of article 44 it is prohibited to swim or bath in the ports of the Belgian coast.

- Along the Belgian beaches vessels are prohibited to launch into sea except from the places indicated by officers of the management of waterways and within the borders appointed by them. Vessels may approach the coast up to a distance of less than 200 m above the low waterline at these places.

- Practising surf kayaking is only allowed in recognised water sport centres.

- Sailboats are not allowed to navigate (ply against the wind) in the fairways of the harbours of the Belgian coast or in the waters of these harbours. If they’re equipped with mechanical driving forces, they ought to use these (art. 10, §9).

- Pleasure crafts take the shortest way to reach their destination in the Belgian harbours, without endangering the safety of navigation.

- Sailing courses can be organised in the harbours of the Belgian coast after being granted a license (art. 38, §3).

- Along the beaches of the Belgian coast no vessel can depart into the sea unless departing from the places indicated by officials of the Waterways and Maritime Affairs Administration and within the limits determined by them (art. 39, §1).

- A vessel can only approach the beach within 200 metres in case of “force majeur” (art. 39, §2).

- Practising water-skiing in the harbours of the Belgian coast is prohibited (art. 38, §2).

- Pleasure vessels of less then 6 metres cannot launch into the sea when the offshore wind is 3 Beaufort or more or when the on-shore wind is 4 Beaufort or more (art.37,§1).
Royal Decree of 14 August 14 1989 to establish additional national measures for the conservation and the management of fish stocks and for the control of fishing activities, BS 2 September 1989, as amended.

This enactment comprises additional measures in consideration of the compliance of EC-regulations concerning the conservation and management of fish stocks. The modifying enactment of 1996 comprises a distinguished restriction of sport fishery, in consideration of the protection of professional fishery.


The King can take measures, proposed by the minister authorised for the protection of the marine environment and the minister of Agriculture, to restrict sport fishery in the sea areas (art.12, §2).

This law is meant to maintain biodiversity, the unharmed character and the nature of the marine environment. By this law every person practising an activity in the marine zone, is compelled to take the necessary precautionary measures to prevent damage and disturbance of the environment. Article 25 of the law for protection of the marine environment describes which activities are obligated to have a license.

Angling at sea with fishing boats need to suffice Royal enactment regarding the nautical inspection. Sport activities practised in-groups do need admittance of ‘Service coastal waterways’ or ‘Piloting services’.

This law is meant to maintain biodiversity, and the unharmed character and nature of the marine environment. By this law every person practising an activity in the marine zone, is compelled to take the necessary precautionary measures to prevent damage and disturbance to the environment. Article 25 of the law for protection of the marine environment describes which activities are obliged to have a license.

Royal Decree of 4 June 1999 concerning 1° the enrolment and registration of pleasure boats; 2° the Royal Decree of 4 April 1996 concerning the registration of seagoing ships and 3° amending the Royal Decree of 4 August 1981 concerning the Police and Shipping Regulations for the Belgian territorial sea, the harbours and the beaches of the Belgian coast, BS 14 August 14 1999.

Article 1 defines “pleasure vessel”: a “vessel” with an overall length between 2.5 and 24 metres that is or is not used for profitable operations, in whichever form, does recreational navigation or is intended for it, with exception of vessels used or intended for the transport of more then 12 passengers.

Regional legislation:

Decision of the Flemish Government of 26 April 1995 concerning beach concessions, BS 29 August 1995:

- The Flemish minister of public works or his deputy must give permission for the launching of vessels from beaches (art. 6, 2e).
- The concessionaire is obligated to keep the beach accessible at all times for rescue services (art.8, 5e). Concessionaires exploiting sea bathing areas ought to organise a rescue service to help drowning persons pursuant to article 9.
- The Flemish minister of public works or his deputy must give permission to launch vessels into the sea from the beaches (art. 6, 2e).
**Municipal regulations:**

The following municipal regulations define zones where non-motorised water sports can take place, and the specific conditions on how they can take place (qualifications, weather, dress ... etc).

- Police Regulation of Blankenberge of 9 June 1987 concerning the launching into sea from the beach of surfboards, pleasure vessels and other gear for beach amusement; General Police Regulation of Blankenberge: Art. 200.
- General Police Regulation of Bredene: Art. 8.4- 8.5,
- General Police Regulation of De Haan: Art. 143.
- General Police Regulation of De Panne: art. 87-99, art. 178-184.
- Police Regulation of Knokke-Heist concerning the beach: Chapter 3.
- General Police Regulation of Koksijde: Chapter 19, Chapter 33.
- General Police Regulation of Middelkerke: Art. 84, 86-93.
- Police Regulation of Nieuwpoort concerning sea bathing.
- Police Regulation of Oostende concerning water sport activities launched from the beaches; Police Regulation of Oostende concerning pleasure vessels.
- Police Regulation of Zeebrugge concerning surfing from the beach.

The following municipal regulations define zones where motorised water sports are allowed, as well as the specific conditions (qualifications, weather, dress, etc.) under which the activities can take place.

- Police Regulation of Blankenberge concerning the launching of surfboards, pleasure vessels and gear from the beach for beach amusement.
- General Police Regulation of Bredene: Art. 8.6.
- General Police Regulation of De Haan: Art. 142, art. 143.8-9.
- General Police Regulation of De Panne: Art. 185-190.
- Police Regulation of Knokke-Heist concerning the beach: Art. 18, art. 24.
- General Police Regulation og Koksijde: Chapter 26, art. 12.
- General Police Regulation of Middelkerke: Art. 86
- Police Regulation of Oostende concerning water sport activities launching from the beach.

**Flexibility**

There is no flexibility permitted concerning the above regulations. Sea kayaking is only permitted in the designated areas and in accordance with the determined measures. Swimming is not permitted in any zones other than the prescribed bathing zones. Safety is only ensured in these zones by rescue services. The effectiveness of the guarded zones is illustrated by the fact that in the past 3 years there have been no drowning in guarded zones during the supervised times. Launching of pleasure boats from the beach into sea is only allowed in the designated areas and in compliance with the conditions of the regulation.

**Future perspectives**

No legal regulations have been put into place concerning the installation of fixed beach accommodations. Nevertheless 13 of the 15 clubs have a permanent building at their disposal, which has been permitted. Permanent buildings are necessary for hygienic and didactical reasons. The province of West-Flanders made (under mandate of AWZ) an inventory of all constructions on the beach and the dike in June 2000. This is called the 'Planning and legal framework for the use of the beach, dike and seawall' (Terra Coastal Zone Management 2000). Following its completion several hearings were organised to come to discuss
the completed report and proposed regulations. It is anticipated the province will shortly submit proposed regulations to the Flemish Community.

The law concerning non-profit associations is creating problems with respect to sourcing more existing accommodation in coastal areas. All water sports associations are encouraged to open up their accommodation to non-members, and especially to tourists. The law concerning non-profit associations doesn't allow non-members to be charged, because this is then as a commercial activity. A solution needs to be found to this problem.

### 9.1.2 Intensity and frequency

**Intensity/frequency per area-unit**

Angling practitioners are subject to capturing minimum sizes. The capture of codfish and sea perch is limited to a maximum of 15 kg codfish and 5 kg sea perch per person per day.

**Flexibility:**

The allowed catch (quota) is determined every year.

### 9.2 ANGLING AT SEA

#### 9.2.1 Description

This activity involves angling from a boat. Other types of "recreational fishery", for example the collection of mussels or other shellfish on the coast or BPNS, are not taken into account here.

Angling from a boat can be organised by private persons, angling associations or by commercial companies. According to the Ecolas inventory (2000) this activity is mainly organised by private persons.

Although recreational fishing is a nature-oriented form of outdoor recreation, the extent to which nature forms part of the experience varies according to the user. Some anglers are very focused on nature and peace, while others practise angling as a competition sport (sport fishermen).

The angling associations are not as large as the yachting-, sailing- and surfing clubs and are mainly occupied with the organisation of competitions. These associations don’t have their own clubhouses on the beach or in the marina.

#### 9.2.2 Subuses and description

Not applicable.

#### 9.2.3 Existing situation

##### 9.2.3.1 Spatial delimitation

Angling at sea from a boat is allowed 200 m above low waterline. Estimates of the spatial distribution of sports fishing at sea are based on the observations of the Institute for Nature Conservation.

**Source**

These results are based on data obtained from VVHV (Vlaamse Vereniging van Hengelsport Verbonden), the Flemish union of angling sport associations.
Other sources are:

Ecolas (2000)


V.V.H.V. (2002)

EAA (European Anglers Association) (2002)

**Reliability margin**

Data obtained from an inquiry of the VVHV, the Flemish union of angling sport associations, comprised their records of organised competitions.

The Ecolas report (2000) was based on a survey the tourist services in the coastal municipalities, the licenses supplied by ‘Service Coastal Waterways of the Waterways and Maritime Affairs Administration of the Ministry of the Flemish government’ and by ‘Piloting Services’ and the concerned legislation.

The data used for the spatial distribution of sport fishing at sea was extracted from the bird observation data collected by the Institute for Nature Conservation. During bird surveys records were also taken of the types of fishing vessels observed in the neighbourhood. This is not 100% reliable as the spatial distribution of sport fishery is dependent on the route of the bird surveys and the bird observer. Nevertheless, a rough picture of the distribution of sport fishing on the BPNS was obtained. Other data sources for sport fishing at sea were not available.

**9.2.4 Type and intensity**

**Intensity per surface-unit**

25% of the total inventory of public and commercial activities on the coast (Ecolas 2000) is related to angling (Map I.3.9a).

Angling related activities are most prevalent in Oostende and Nieuwpoort. However, they are also dispersed over the other municipalities (Ecolas 2000).

In 2000 there were a total of 20 angling associations, private persons or companies organising angling at sea. Eight of them were in Oostende, 5 in Nieuwpoort, 2 in Knokke-Heist and one company in Blankenberge, Bredene, De Haan, De Panne and Zeebrugge.

The VVHV (Vlaamse Vereniging van Hengelsport Verbonden), the Flemish Association for Sports angling has approximately 16000 members (salt and fresh water anglers) of an estimated total of 200000 angling sport practitioners (this is approximately 3.3% of the Flemish population). According to the memberships list of the VVHV there are 51 clubs that operate boats, which are grouped in the VVBZ (Vlaams Verbond Bootvissers op Zee), the Flemish association for boat angling at sea. The VVHV has 55 boats (with approximately 50 to 60 navigation days), which can each take up a maximum of 5 persons on board on each trip V.V.H.V 2002).

In the period 1997-2001 the number of members of the boat angling sports federation decreased by 20%. The VVHV estimates there are approximately 14000 boat anglers in Flanders.

These sport fishermen are mainly active closer to the coast. Reference is made to the location and intensity in the maps included in this report.
**Frequency per unit of time**

According to VVHV (V.V.H.V 2002), their associated clubs each organise on average 5 angling activities per year. The mean duration of a trip is approximately 5 to 6 hours, excluding the navigation time (which is about 1 hour).

During winter months (October till April) the angling activities mainly take place in an area of 5 or 6 mile from the coast. Competitions during summer months and under good weather conditions can take place on or just over the “Gootebank”. This is the most distant location chosen by the organisation.

During winter months ‘cod’, ‘whiting’ and ‘dab’ are caught. In the summer mainly ‘sole’, ‘whiting’, ‘dab’ and ‘mackerel’ are captured.

In 2002 the number and weight of the captures during 32 boat angling competitions of VVBZ (Vlaams Verbond Boothengelen op Zee) were recorded (this is a sample of approximately 2/3 of all VVBZ competitions). In total 1400 fishermen participated and there was a total of 180 fishing-hours. Overall 31948 fish were captured representing a total weight of 8454 kg. This means an average of 23 fish were caught per participant. The average (total) weight caught per contestant was 6kg. This is a mean fish weight of approximately 265g.

The total amount of fish officially caught during offshore competition can thus be estimated to be in the range of 10 – 15 ton.

- Division according to time:

Activities related to angling occur during the whole year, depending on weather conditions. It goes without saying that during the winter months and bad weather no angling sport activities are practised.

- Division according to nature and time:

Angling activities organised along the coast by angling associations and angling trips at sea organised by private persons or companies almost all occur year-round (17 of the 20) in Oostende and Nieuwpoort and Knokke-Heist. There also are 2 angling activities (in Oostende) that occur periodical (April-October, depending on the weather) and one angling activity (in De Panne) in the category of one-time activities.

**9.2.5 Interactions**

**9.2.5.1 Suitability for user**

Details – if applicable – can be found in the chapter that is specifically dedicated to “Suitability”.

**Biological adequacy**

No restrictions

**Geological/physical adequacy**

No restrictions

**Hydrological adequacy**

No restrictions
9.2.5.2 **Impact on other users**

Details – if applicable – can be found in the chapter that is specifically dedicated to “Interaction among users”.

There is a conflict between recreational anglers at sea and professional fishermen. Professionals accuse recreational anglers of fishing a ‘large’ part of their quota. The recreational fishermen dispute this allegation and are extremely unhappy about the recent quota that has been imposed on codfish and sea perch to a maximum of 15 kg codfish and 5 kg sea perch per person per day. This has an economic impact on commercial operators within the recreational fishery.

9.2.5.3 **Impact on environment**

Details – if applicable – can be found in the chapter that is specifically dedicated to “Interaction between users and the environment”

**Biological**

The catches are very diverse throughout the year, but global trends can be established. From October till March the main preys are young cod, whiting, dab and flounder, while from April to September they catch sole, dab, whiting and mackerel.

It would appear, looking at the estimates, that recreational fishing has a small effect on the available fish stocks. In addition, an effect on the benthos can be expected.

**Geological/physical**

No/little impact

**Hydrological**

No/little impact

9.2.5.4 **Impact on socio-economy**

**Economic**

The numbers of fishing permits issued in Flanders since 1984 has decline.

A recent inquiry (n= 1430) by the Flemish Association for Sports angling (VVHV) (NELOS, Rudi Baert pers. comm. 2004) indicates that a boat angler spends approximately 900 Euro/year on its hobby\(^1\). This figure multiplied with 14000 boat anglers comes to 12.6 Mio Euro/year. This comprises boat rental, carriion, material costs, membership fees, licenses, accommodation and transportation costs, specific dress, purchase of specialised magazines, books, videos, etc.

Another conclusion of the VVHV inquiry is that a lot of boat anglers (who spend on average 900 Euro yearly, which is more then the 600 Euro spent yearly by an angler of another discipline) often practise their hobby in foreign countries, which means a ‘loss’ for the Flemish economy.

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1 This inquiry is representative for frequent (approximately 45 fishing trips a year) Flemish anglers. It is not representative for the “occasional” angler who goes fishing less then 10 times a year.
A survey of the Province of West-Flanders (1998) pointed out that fishermen go fishing in public waters on average 18 times a year and spend 9-10 Euro per trip (apart from the expenditure for basic materials). In total this annually amounts to 11.6 million Euro of cumulated expenditures.

The Ecolas report (2000) indicates the estimated returns of angling at sea amounts to 2.487 Mio Euro (Table I.3.9a). This is a significant part (29.2%) of the total yearly turnover (8505174 Euro) generated by all commercial and public activities inventoried at the coast in 2000. Angling associations mainly organise competitions on a non-profit basis. So the angling associations are not included in the assessment of the yearly turnover in this report.

**Table I.3.9a: Overview of the assessment of the returns of angling at sea (Ecolas 2000)**

<table>
<thead>
<tr>
<th>Initiator</th>
<th>estimated numbers of days active / year</th>
<th>Cost price (Euro)</th>
<th>estimated number of participants</th>
<th>Return (Euro)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vyvey-Noukens E</td>
<td>237</td>
<td>44.62</td>
<td>6</td>
<td>63517</td>
</tr>
<tr>
<td>Bvba Rederij Sportfishing</td>
<td>85</td>
<td>29.75</td>
<td>84</td>
<td>211915</td>
</tr>
<tr>
<td>De sportvissers</td>
<td>237</td>
<td>29.75</td>
<td>46</td>
<td>324677</td>
</tr>
<tr>
<td>Ship Technics bvba</td>
<td>237</td>
<td>44.62</td>
<td>10</td>
<td>105861</td>
</tr>
<tr>
<td>Nieuwpoort onbekend 1</td>
<td>237</td>
<td>44.62</td>
<td>10</td>
<td>105861</td>
</tr>
<tr>
<td>Nieuwpoort onbekend 2</td>
<td>237</td>
<td>34.71</td>
<td>10</td>
<td>82349</td>
</tr>
<tr>
<td>De sportvissers Albatros</td>
<td>237</td>
<td>29.75</td>
<td>46</td>
<td>324677</td>
</tr>
<tr>
<td>Ostend Jade</td>
<td>237</td>
<td>57.02</td>
<td>12</td>
<td>162336</td>
</tr>
<tr>
<td>Vzw PUB</td>
<td>192</td>
<td>24.77</td>
<td>12</td>
<td>57070</td>
</tr>
<tr>
<td>Bounty 1</td>
<td>237</td>
<td>29.75</td>
<td>35</td>
<td>247037</td>
</tr>
<tr>
<td>Bounty 2</td>
<td>237</td>
<td>24.79</td>
<td>48</td>
<td>282309</td>
</tr>
<tr>
<td>Sportvissers Marcella</td>
<td>42</td>
<td>32.23</td>
<td>43</td>
<td>57653</td>
</tr>
<tr>
<td>Franlis-Seeger Sunships</td>
<td>42</td>
<td>29.75</td>
<td>39</td>
<td>48266</td>
</tr>
<tr>
<td>Bvba Sunships</td>
<td>85</td>
<td>24.79</td>
<td>39</td>
<td>81985</td>
</tr>
<tr>
<td>Callebout Patricia</td>
<td>237</td>
<td>24.79</td>
<td>10</td>
<td>58814</td>
</tr>
<tr>
<td>Bievliet D</td>
<td>85</td>
<td>29.75</td>
<td>46</td>
<td>116049</td>
</tr>
<tr>
<td>Vermeulen E</td>
<td>292</td>
<td>44.62</td>
<td>12</td>
<td>156348</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>2486724</strong></td>
</tr>
</tbody>
</table>
It has to be noted that although information and several studies are available on the general socio-economic aspects of recreational fishing and angling, there are significant data gaps concerning angling in the Belgian sea.

**Social**

Activities correlated with angling are distributed over the whole year. Angling at sea has a largely fixed clientele. The angling associations tend to be regional. This means that people who live in a region or municipality tend to be members of an association.

### 9.3 SOFT NON-MOTORISED WATER SPORTS

#### 9.3.1 Description

The coast is one of the most important tourist locations within Belgium, and the tourist-recreational use of this area is continuously increasing (PSEP 2003). The increase in water activities in the North Sea correlates with increasing beach recreation.

A distinction is made between non-motorised and motorised water sports. Non-motorised water sports are defined as all the water activities where no engine is involved.

#### 9.3.2 Subuses and description

This category of non-motorised water sports comprises the following activities:

- canoe/kayak
- windsurfing
- swimming and rescue services
- sailing²

**Canoe/kayak**

Canoeists and those that kayak are distinguished by 2 groups, namely the experienced and inexperienced canoe and kayak navigators. The experienced practitioners mostly have their own canoe or kayak and are mainly focused on the peace and nature experience.

The inexperienced canoe and kayak navigators mainly rent a canoe or kayak. They are less focused on the surroundings, but more on the social contacts and the ‘fun-aspect’ of day canoeing or kayaking.

**Windsurfing**

Windsurfing is a sport in which you sail across the sea by standing on a board and holding onto a large sail. Some so-called ‘dry marinas’ exist along the Belgian coast. Sailboats without motors and windsurfers, amongst others, have their homeport in these marinas.

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² Sailing with dinghies (small open lee board sailing boats, ranging from the smallest one-person boat -an optimist- to the bigger catamaran –which has to be sailed by several sailors)
Sailing

Sailing in the Belgian part of the North Sea comprises several categories of sailing activities. A distinction can be made between yachting and sailing with dinghies.

Yachting is defined as sailing cabin sailing vessels with an inboard or outboard auxiliary motor (see motorised water sports). Dinghies are small open lee board sailing boats, ranging from the smallest one-person boat -an optimist- to the bigger catamaran, which has to be sailed by several sailors) (Zeekajak, Bart Pauwels pers.comm. 2004).

It is only the latter category that will be considered in respect to soft non-motorised water sports.

Swimming and rescue services

Swimming activities can be divided into recreational swimming, which is only allowed in guarded zones, and competitions or organised swimming activities.

9.3.3 Existing situation

9.3.3.1 Spatial delimitation

Canoe/kayak

These activities mainly occur within 1 km of the coast. The vessels are launched into water from marked zones and subsequently navigate along the coastline for a couple of km.

Most kayak clubs in Belgium are connected to fresh water activities including such things as wild water kayaking, kayak polo, competitions ... (all activities that are not practised at sea). There are several VVW water sport centres along the Belgian coast, some of which rent kayaks for recreation at sea. In theory kayak clubs should be connected to BLOSO, which keeps records of each club's program of activities at sea. In practice this is generally not the case, meaning that little information is available in respect of each club's activities at sea.

A distinction can be made between surf and sea kayaking. The former is practised within a 200-300 m zone from the low waterline, mostly during winter. Surf kayaking can be done along the whole coast (<200 m above low waterline), but preferred places are around the western stockade of Blankenberge and the harbour wall of Zeebrugge. Surf kayaking is mostly practised outside the 200 m low waterline, and generally doesn't go further than 2-4 nautical miles. Both activities are required to respect swimming zones.

Windsurfing and sailing

There are 15 water sports associations situated along the Belgian coast, divided over 9 of the 10 coastal municipalities, with a base on the beach (Table I.3.9b). Nieuwpoort is the only coastal municipality that does not have a beach club.

Table I.3.9b: List of sail/surf clubs along the Belgian coast (Source: Luc Geirnaert VVW, pers.comm.)

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Beach club</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knokke-Heist (4)</td>
<td>Surfers Paradise</td>
</tr>
<tr>
<td></td>
<td>Royal Belgian sailing Club (RBSC) Het Zoute</td>
</tr>
</tbody>
</table>
These clubs have historically grown as a result of individuals seeking a place to put their boat or surfboard on the beach. At the beginning of the ‘80s and on the initiative of BLOSO, the government indicated those beaches that could serve as launching zones for surfers and sailors. Swimming is not allowed in these zones. As most inhabitants of the flats preferred to swim right in front of their door, these zones were mostly installed on deserted places or places with no or few buildings. These associations installed showers and even built sanitary facilities on the beach.

**Swimming and rescue services**

Swimming in the Belgian part of the North Sea is only allowed in the guarded swimming areas. All defined zones are guarded from 10h30 to 18h30.

**Table I.3.9c: Triathlon and swimming activities at the Belgian coast**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TRIATHLON</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Triathlon Blankenberge</strong></td>
<td></td>
</tr>
<tr>
<td>There is swimming in the sea, parallel to the coast and along the sea current, over a distance ok 1 km. Two buoys have to be rounded: the first buoy is situated near the place of departure of the Duinse Polders; the second is closer to the pier. (available at <a href="http://www.knokke-heist.be">www.knokke-heist.be</a> on 08/07/2003)</td>
<td></td>
</tr>
<tr>
<td><strong>Beach triathlon Iron dude 2003 - Knokke-Heist</strong></td>
<td></td>
</tr>
<tr>
<td>Surfers Paradise organises yearly a beach triathlon for all the members of the association. The competition includes a 500m swim in the sea.</td>
<td></td>
</tr>
</tbody>
</table>
### SWIMMING AT SEA

<table>
<thead>
<tr>
<th>Location</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oostende</strong></td>
<td>OOSTENDE Belgian Championship Short Distance (available at <a href="http://www.vzl.be">www.vzl.be</a> on 08/07/2003, Open water/Competition Calendar), organised by Royal Ostend Swimming Club (available at <a href="http://www.ostendswimming.be">www.ostendswimming.be</a> on 08/07/2003)</td>
</tr>
<tr>
<td><strong>Knokke-Heist</strong></td>
<td>500m and 1500m swimming race at sea. Organisation by the sports department of Knokke-Heist. (available at <a href="http://www.knokke-heist.be">www.knokke-heist.be</a> on 08/07/2003)</td>
</tr>
<tr>
<td><strong>Blankenberge</strong></td>
<td>The sports department of Blankenberge City organises a 500 or 1500m swimming race at sea. This is in co-operation with the Beach rescue service and the swimming association of Blankenberge. (available at <a href="http://www.bvz.be/inhoud/Info/zeezwemmen.htm">http://www.bvz.be/inhoud/Info/zeezwemmen.htm</a> on 08/07/2003) Sea swimming each Saturday of July and August. Organisation: Beach rescue service of Blankenberge member of I.K.W.V. (available at <a href="http://www.blankenberge-online.be/strandredding.html">www.blankenberge-online.be/strandredding.html</a> on 08/07/2003)</td>
</tr>
</tbody>
</table>

### LIFESAVING – SWIMMING

<table>
<thead>
<tr>
<th>Location</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>De Haan</strong></td>
<td>Haanse Reddingsclub with 178 members</td>
</tr>
<tr>
<td><strong>Westende, Middelkerke</strong></td>
<td>Flanders Coast Lifesaving Team: 46 members</td>
</tr>
<tr>
<td><strong>Oostende</strong></td>
<td>Oostendse Reddingsclub: is no member of the 'Vlaamse Reddingscentrale’, they don't participate in the championships</td>
</tr>
</tbody>
</table>

## Source

These data and information are based on:

- **Ecolas** (2000)
- **Interurban Coastal Rescue Services West-Flanders** (2002)
- **Terra Coastal Zone Management** (2000)
- Luc Geirnaert, Verbond van Vlaamse Watersportverenigingen, pers. comm.

208
VYF Vlaamse Yachting Federatie. Membership list 2002 received on 26/08/2003


Eliaerts et al. (1998)

Maes et al. (2002)

**Reliability margin**

The Ecolas inventory (2000) was based on survey of the tourist services in the coastal municipalities, the licenses supplied by ‘coastal waterways service’ and by ‘Piloting services’ and the concerned legislation.

The text is based on the sources mentioned above, on an information search of literature and websites and a telephone query of the sport services in the coastal municipalities.

**Future perspectives**

Water sports generally show diverse temporal trends: windsurfing for example has known an enormous growth, but is now only practised by a limited group. A new dynamic sport today is “kite surfing” (this is surfing at sea with a kite as sail). Other new trends in the non-motorised water sports activities are wave surfing (surfing on the waves on a board without sail), sea kayaking and – canoeing and sea rafting. Therefore the constant dynamic inherent within water sports continuously draws certain groups to the water (Resource Analysis 2003).

9.3.3.2 **Type and intensity**

**Intensity per surface-area**

Canoe/kayak:

No more specific information available.

Windsurfing and sailing:

The 15 associations along the Belgian coast counted in 2002 included 6833 permanent members (VYF Vlaamse Yachting Federtaie membership list 2002). Those members launch into sea from these beaches mainly to surf or sail in open boats. All clubs have permanent and non-permanent beach accommodation at their disposal. Besides the permanent members, the clubs organise sailing- and surf courses – traineeships for temporary or trial members. A limited study by VVW (Luc Geirnaert pers. comm.) showed the number of enrolments for those traineeships had increased from 2322 in 1988 to 7370 in 2001. 80 percent of the surf course trainees are between 11 and 16 years. 52% of sail trainees are between 8 and 13 years old, and 34% are over 20 years old.


<table>
<thead>
<tr>
<th>Municipality</th>
<th>Number of guarded zones</th>
<th>Metres guarded zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>De Panne</td>
<td>1</td>
<td>300</td>
</tr>
</tbody>
</table>

Table I.3.9d: Overview of guarded windsurf zones (Source: Interurban Coastal Rescue Services West-Flanders 2002)
46% of the total inventoried public and commercial activities (Ecolas 2000) are related to sailing, surfing and yachting. Activities related to sailing, surfing and yachting are dispersed over several municipalities. The sail- and surf clubs are mainly situated in Knokke-Heist. Municipalities with marinas (Blankenberge, Oostende, Nieuwpoort and Zeebrugge) can organise a lot of activities related to sailing, surfing and yachting all year round.

Of the 37 activities in category 1 (all sailing-, yachting- and surf clubs or associations and private persons organising traineeships or courses relating to surfing and sailing), most of them take place in Oostende (6), Nieuwpoort (6), Blankenberge (5) and Knokke-Heist (5). The rest of the activities are dispersed over the other coastal municipalities.

The table below is based on the membership list of VYF (Vlaamse Yachting Federatie) of 2002. Missing values were collected through a phone survey on 16/10/03 of the clubs concerned (VVW Heist, VVW Westende).

Table 1.3.9e: Overview of coastal surf- and yacht clubs associated to VYF

<table>
<thead>
<tr>
<th>Name</th>
<th>Municipality</th>
<th>Activities</th>
<th>Number of members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surfers Paradise</td>
<td>Knokke-Heist</td>
<td>windsurfing, kite surfing, catamaran, sailing</td>
<td>244</td>
</tr>
<tr>
<td>Side Shore</td>
<td>De Panne</td>
<td>windsurfing, kite surfing</td>
<td>35</td>
</tr>
<tr>
<td>Windekind</td>
<td>Oostduinkerke</td>
<td>windsurfing, kite surfing</td>
<td>155</td>
</tr>
<tr>
<td>Twins</td>
<td>Bredene</td>
<td>windsurfing, kite surfing, sailing, catamaran</td>
<td>435</td>
</tr>
<tr>
<td>Offshore</td>
<td>Blankenberge</td>
<td>windsurfing, kite surfing</td>
<td>75</td>
</tr>
<tr>
<td>KYC (Koksijde Yachting)</td>
<td>Koksijde</td>
<td>catamaran, sailing,</td>
<td>196</td>
</tr>
</tbody>
</table>
## Swimming and rescue services:

The annual report of the Interurban Coastal Rescue Services West-Flanders (2002) lists some recent facts and figures. Table I.3.9f gives an overview of the guarded zones for bathers and Table I.3.9g shows the number of lifeguard daily on duty in 2002.

### Table I.3.9f: Overview of guarded bathing zones (Source: Interurban coastal Rescue services West-Flanders 2002)

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Number of guarded zones</th>
<th>Metres guarded zone</th>
<th>period when zones are guarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>De Panne</td>
<td>5</td>
<td>2200</td>
<td>1/7-31/8</td>
</tr>
<tr>
<td>Koksijde</td>
<td>11</td>
<td>4835</td>
<td>All posts (4835m): 1/7-31/8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 posts (1145m): 22/6-15/9</td>
</tr>
<tr>
<td>Nieuwpoort</td>
<td>5</td>
<td>1250</td>
<td>1/7-31/8</td>
</tr>
<tr>
<td>Middelkerke</td>
<td>16</td>
<td>6630</td>
<td>1/7-31/8</td>
</tr>
<tr>
<td>Oostende</td>
<td>8</td>
<td>3070</td>
<td>All posts (3070m): 1/7-1/9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 posts (830m): 2 WE in June</td>
</tr>
</tbody>
</table>
### Table I.3.9g: Number of lifeguards daily on duty in 2002 (Source: Interurban Coastal Rescue Services West-Flanders 2002)

<table>
<thead>
<tr>
<th>Municipality</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
<th>September</th>
</tr>
</thead>
<tbody>
<tr>
<td>De Panne</td>
<td>0</td>
<td>0</td>
<td>34</td>
<td>34</td>
<td>0</td>
</tr>
<tr>
<td>Koksijde</td>
<td>0</td>
<td>10</td>
<td>54</td>
<td>54</td>
<td>10</td>
</tr>
<tr>
<td>Nieuwpoort</td>
<td>0</td>
<td>0</td>
<td>23</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td>Middelkerke</td>
<td>0</td>
<td>0</td>
<td>54</td>
<td>54</td>
<td>0</td>
</tr>
<tr>
<td>Oostende</td>
<td>0</td>
<td>10</td>
<td>28</td>
<td>28</td>
<td>0</td>
</tr>
<tr>
<td>Bredene</td>
<td>0</td>
<td>0</td>
<td>19</td>
<td>19</td>
<td>0</td>
</tr>
<tr>
<td>De Haan</td>
<td>0</td>
<td>0</td>
<td>43</td>
<td>43</td>
<td>0</td>
</tr>
<tr>
<td>Blankenberge</td>
<td>6</td>
<td>6</td>
<td>30</td>
<td>28</td>
<td>6</td>
</tr>
<tr>
<td>Brugge</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>Knokke-Heist</td>
<td>0</td>
<td>22</td>
<td>51</td>
<td>51</td>
<td>22</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>6</strong></td>
<td><strong>48</strong></td>
<td><strong>345</strong></td>
<td><strong>342</strong></td>
<td><strong>43</strong></td>
</tr>
</tbody>
</table>

The next Table I.3.9h gives an overview of the incidents in 2002.

### Table I.3.9h: Number of deaths by drowning and near deaths by drowning on the Belgian coast in 2002 (Source: Interurban Coastal Rescue Services West-Flanders 2002)

<table>
<thead>
<tr>
<th>Number of deaths by drowning</th>
<th>During opening hours</th>
<th>In guarded zones</th>
<th>In un guarded zones</th>
<th>Off opening hours</th>
<th>In guarded zones</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>6</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>212</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3.7.1 Overview of the number of deaths and near deaths by drowning during opening hours and off opening hours at sea.

<table>
<thead>
<tr>
<th>Description</th>
<th>In unguarded zones</th>
<th>2</th>
<th>In guarded zones</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL number of deaths by drowning</td>
<td></td>
<td></td>
<td></td>
<td>37</td>
</tr>
<tr>
<td>Number of near deaths by drowning</td>
<td>During opening hours</td>
<td>11</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td></td>
<td>In unguarded zones</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Off opening hours</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>In unguarded zones</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL number of near deaths by drowning</td>
<td></td>
<td></td>
<td></td>
<td>39</td>
</tr>
</tbody>
</table>

**Lifesaving-swimming:**

According to the VRC (Vlaamse Reddingscentrale, Veerle Van Raemdonck pers. comm.), 2 championships (Flemish and Belgian Championship lifesaving open water) and 5 to 10 (depending on the weather) training sessions in the period June-September are organised yearly. These activities (competitions and training) last one day and are composed partly on the beach and partly in the sea. The tests are done in or close to the breakers. During competitions the VRC Rescue team accompanies the swimmers with 3 rescue boats. Approximately 10 to 20 people participate in the training sessions and championships usually attract around 100 participants.

**Frequency per unit of time**

**Canoe/kayak:**

Little information is known about kayaking. Sea-kayak, however, only takes place occasionally and generally does not occur during the high summer peak. Some water sport centres organise courses. In 2003 the VVW water sport club of Heist attracted about 25 students for the kayak courses (during 6 days). Furthermore, small groups of people (around 6) kayak 1 to 2 times a month at sea (pers. Comm. Bart Pauwels).

More then half of the questioned practitioners of canoeing/kayaking (and rowing/water bicycle) (n=26) reported that they do their sport only a few times a year (Resource Analysis 2003).

**Windsurfing/sailing:**

Activities related to sailing and surfing occur during the whole year. They are dependent on weather conditions. It goes without saying that during the winter months and bad weather no sailing and surfing activities are practised (Ecolas 2000).

An inquiry of WES (2002-03) showed that 75% of the respondents (n=8) practised windsurfing only a few times a year. The questioned sailors (n=46) reported going sailing more often: that is 72% go sailing at least once a month (and 50 % go sailing at least once a week) (Resource Analysis 2003).

In Table I.3.9i information is given about the time expenditure of sailing from a WES-inquiry.
Table I.3.9.1: (mean) Time expenditure of sailing (n=33), WES-inquiry 2002-03 (% and in hour)

<table>
<thead>
<tr>
<th>Description</th>
<th>Sailing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time expenditure</td>
<td></td>
</tr>
<tr>
<td>Less then 2 hour</td>
<td>6.1</td>
</tr>
<tr>
<td>2 to 3 hour</td>
<td>9.1</td>
</tr>
<tr>
<td>3 to 4 hour</td>
<td>6.1</td>
</tr>
<tr>
<td>At least 4 hour</td>
<td>78.8</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
</tr>
<tr>
<td>Mean time expenditure</td>
<td>6.3</td>
</tr>
</tbody>
</table>

Swimming and rescue services:

The swimming frequency (n=78) was more variable, ranging from a few times once a week, to a few times once a month and to a few times once a year (Resource Analysis 2003).

Source

These data and information are based on:

Ecolas (2000)
Interurban Coastal Rescue Services West-Flanders (2002)
Terra Coastal Zone Management (2000)
Luc Geirnaert, Verbond van Vlaamse Watersportverenigingen, pers. comm.
VYF Vlaamse Yachting Federatie. Membership list 2002 received on 26/08/2003
Eliaerts et al. (1998)
Maes et al. (2002)

Reliability margin

The Ecolas inventory (2000) was based on a survey of the tourist services in the coastal municipalities, the licenses supplied by ‘coastal waterways service’ and by ‘Piloting services’ and the concerned legislation.
The text is based on the sources mentioned above, on an information search of literature and websites and a telephone query of the sport services of the coastal municipalities.

9.3.3.3 Data gaps

It has to be noted that although information and several studies are available on water recreation in general (i.e. inland and coastal waters), there are significant data gaps concerning non-motorised coastal water sports in Belgium. Studies such as the framework of the Management plan Water recreation (Resource Analysis 2003), of the Waterways and Maritime Affairs Administration (Ministry of the Flemish Community), give useful information from surveys of water recreation in Flanders (practised frequency, expenditure annoyances … etc). However, additional inquiries and studies need to be executed in order to build up coastal-specific parameters. Furthermore, the existing studies give no insight into the density or the geographical distribution of the activities.

An interesting study by Resource Analysis (2003), concerning the economic impact of the entire water recreation, gives useful numbers for yearly turnover, (coefficients to calculate) added value and employment (based on turnover) and a coefficient to calculate the percentage of capital that finds its way back to the government through taxes and (excise) duty. To be able to determine which share of the added value, employment … etc is generated in Flanders (at the coast), regional input-output models have to be made available.

The number of practitioners that are members of a water sport associations and -clubs underlines the considerable size/magnitude of the sector. Although general figures for Flanders are available, there are no specific figures for the coastal region.

9.3.4 Interactions

9.3.4.1 Suitability for user

Details – if applicable – can be found in the chapter that is specifically dedicated to "Suitability".

Biological adequacy

No restrictions

Geological/physical adequacy

No restrictions

Hydrological adequacy

No restrictions

9.3.4.2 Impact on other users

Spatial conflict

Non-motorised water sports:

Because all non-motorised water sports take place within 1 km above the low water line, normally no major spatial problems should occur for this recreational group.

According to the sector, correct canoe- and kayak behaviour encourages respect for nature and other recreational users (e.g. anglers). Nevertheless, other non-motorised sports use the defined bathing zones
to launch into sea, despite the fact that this is expressly prohibited. Stricter supervision and compliance should be provided to avoid this in the future.

**Other users:**

As most use of the BPNS takes place beyond 1 km, no major problems are expected. However, the creation of new nature conservation areas could cause problems.

**Intensity conflict**

The WES inquiry (2002-03) shows that 21.6% of respondents (n=88 in a coastal marina) experience nuisance from other vacationers/users. The most frequent reported types of nuisance are in descending order: jet ski’s, in the amount of general activity, speedy navigation, motorboats, bicycles, cars, motorcycles, inexperienced sailors, fishermen and dogs walking around freely (Resource Analysis 2003).

### 9.3.4.3 Impact on environment

**Biological**

No/little impact

**Geological/physical**

No/little impact

**Hydrological**

No/little impact

According to the MareDasm study of the University of Ghent (Maes et al. 2002) the following types of pollution originate from beach recreation:

**Toxic pollution:**

Swimming and sunbathing potentially causes adverse environmental effects through the use of suntan oil, which may significantly contribute to oil pollution. Suntan oil doesn’t contain mineral oil, but rather the less harmful vegetable oils such as paraffin and stearine. Furthermore, it contains emulsifiers and UV-captors, the effect of which on the water system is unclear. The oil load of the whole North Sea is estimated to be between 71000 and 150000 tonnes yearly. It is clear that the input of suntan oil is negligible in relation to these numbers.

**Eutrophication:**

Excretion products of bathers (urine and sweat) can contribute to eutrophication. In the coastal zone the contribution of beach recreation to the total nitrogen- and phosphor emission amounts up to maximum 0.1 % and is thus a negligible contribution.

**Physical pollution:**

Possible acoustic and visual disturbance of beach recreants, surfers and catamarans can have an impact on the water system. These could possibly be expressed as number per hectare. Recurring disturbances

---

3 Beach recreation comprises recreational activities at and departing from the beach, such as swimming, sunbathing, angling, walking, surfing and sailing.
can render certain areas on the beach and in the dunes unusable as feeding, resting and breeding places for birds and marine mammals. It is however not expected they will have a large-scale effect.

**Biological pollution:**

Bathers can directly introduce faecal coli forms into the environment, such as *Escherichia coli*, enterococci and human pathogens. These pollutants don’t naturally occur in marine water, but they can be relatively easy excreted by humans and other warm-blooded (homoeothermic) animals. Typical problems associated with the presence of these microbiological indicator organisms and human pathogens are mainly related to human health such as gastro-intestinal problems and irritations of skin, eyes, ears and respiration.

**Perceptual pollution:**

Obviously the noise and views of busy beach recreation can have a negative effect on the “sense of place” at the coast.

**9.3.4.4 Impact on socio-economy**

**Economic**

Awareness is growing that leisure time, recreation and tourism activities are not only a cost to municipalities and regions, but also the source of revenue and employment. For certain regions, like the coast, (water) recreation and – tourism is or can be an important catalyst for the economic development.

**Swimming and rescue services:**

Table I.3.9j: Number of recruited lifeguards

<table>
<thead>
<tr>
<th>Municipality</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
<th>September</th>
</tr>
</thead>
<tbody>
<tr>
<td>De Panne</td>
<td>0</td>
<td>0</td>
<td>45</td>
<td>44</td>
<td>0</td>
</tr>
<tr>
<td>Koksijde</td>
<td>0</td>
<td>15</td>
<td>74</td>
<td>81</td>
<td>16</td>
</tr>
<tr>
<td>Nieuwpoort</td>
<td>0</td>
<td>0</td>
<td>36</td>
<td>26</td>
<td>0</td>
</tr>
<tr>
<td>Middelkerke</td>
<td>0</td>
<td>0</td>
<td>72</td>
<td>72</td>
<td>0</td>
</tr>
<tr>
<td>Oostende</td>
<td>0</td>
<td>10</td>
<td>55</td>
<td>55</td>
<td>0</td>
</tr>
<tr>
<td>Bredene</td>
<td>0</td>
<td>0</td>
<td>26</td>
<td>27</td>
<td>0</td>
</tr>
<tr>
<td>De Haan</td>
<td>0</td>
<td>0</td>
<td>56</td>
<td>55</td>
<td>0</td>
</tr>
<tr>
<td>Blankenberge</td>
<td>8</td>
<td>8</td>
<td>43</td>
<td>38</td>
<td>8</td>
</tr>
<tr>
<td>Brugge</td>
<td>0</td>
<td>0</td>
<td>14</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>Knokke-Heist</td>
<td>0</td>
<td>22</td>
<td>63</td>
<td>63</td>
<td>22</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>8</strong></td>
<td><strong>55</strong></td>
<td><strong>484</strong></td>
<td><strong>475</strong></td>
<td><strong>46</strong></td>
</tr>
</tbody>
</table>
Surfing and non-motorised sailing:

Table I.3.9k: Overview of the total returns inventoried by Ecolas in 2000

<table>
<thead>
<tr>
<th>Nature of activity</th>
<th>Return (EURO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surf- and sail clubs(^4)</td>
<td>1065942</td>
</tr>
<tr>
<td>Traineeships and courses(^5)</td>
<td>644523</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1710465</strong></td>
</tr>
</tbody>
</table>

The total (some 80) inventoried public and commercial activities in the sea area of Belgium generate income for about 150-200 people. In summer months this can rise due to student employment.

**Social**

Activities related to sailing and surfing have a fixed and broad clientele. That means that only people already involved participate, but that there is a broad range of ages that participate. Sail- and surf clubs organise traineeships for members and non-members during summer. Most sail- and surf traineeships are meant for young people. The traineeships take place over the course of a week, and trainees generally stay in the coastal municipality during that time. Most sail- and surf clubs have programs designed to increase proficiency, which existing members regularly join. These clubs also organise competitions including: club competitions and/or national competitions. These competitions can entice some hundred spectators at a time.

Clubs and associations bring together many people. They don’t restrict their activities to the summer months, but are generally accessible to their members and the public throughout the year. This is certainly true for sailing- and surfing clubs.

The survey (WES 2002-03, n=47) shows that 72.3% of the sailors in Flanders are a member of a water sport club.

In Flanders 25% of the respondents (n=128 other activities on the water) are members of a water sport club (WES-inquiry 2002-03).

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\(^4\) The activities comprise the rental of sailing- and surfing material, organisation of traineeships and courses, and the storage of sailing- and surfing material of members. Reckoning with an average of 300 members, rental of material of 120 hours yearly, storage of material from 25 persons and the organisation of 6 traineeship/courses with 15 participants.

\(^5\) Reckoning with the cost price and the number (2-5) of people employed.
9.4 MOTORISED WATER SPORT AT SEA

9.4.1 Description

The coast is one of the most important tourist destinations in Belgium and the intensity of tourist-recreational use of this area is continuously increasing (PSEP 2003). The increase in beach recreation correlates with an increase in water activities in the North Sea. A distinction is made between non-motorised and motorised water sports.

Motorised water sports are defined as all water activities where the intensive use of an engine is involved.

9.4.2 Sub-uses and description

The motorised water sport activities at sea can be subdivided into:

- speed navigation (motor boating, jet ski, water ski);
- passenger navigation;
- recreational navigation;
- (wreck) diving.

**Speed navigation**

The term "speed navigation" includes a wide range of recreational activities on the water. In this project speed navigation is mainly used in respect of speedboats, water-skis and jet skis.

Water-ski navigation includes 7 basic disciplines: classic, racing, barefoot, wake boarding, disabled, show-ski and cable-ski. Most of these disciplines demand a waterfront that is as flat as possible (Resource Analysis 2003).

**Passenger navigation**

Passenger navigation is defined as vessels transporting a minimum of twelve passengers. Passenger navigation caters to the tourist-recreational aspect of activities by offering certain trips between or via interesting locations.

Passenger navigation is thus defined as 'boat trips within a harbour or between two coastal cities', excluding ferry traffic (fixed transport routes, which are classified as 'shipping').

The yearly amount of people that passenger navigation transports is remarkable. One vessel represents the equivalent of several yachts. This branch therefore provides an important contribution to making the population acquainted with water recreation and water tourism. It can be argued that passenger navigation is a very democratic form of water recreation. Besides the fact that passenger navigation can be considered as water recreation in its own right, the incentive it provides to take part in other forms of water recreation and -tourism cannot be underestimated (Resource Analysis 2003).

**Motorised recreational navigation**

Recreational navigation on the coast consists not only of motorised tour boats, but also of sailing yachts. According to the MareDasm report of the University of Gent (Maes et al. 2002) recreational navigation in the North Sea consists mainly of cabin sailing boats and with only 5% made up by of motorboats.
Diving

Although some sources (Eliaerts et al. 1998) classify diving as a non-motorised water sport activity, in the frame of our study we consider it as a motorised water sport based on the fact that diving activities in the Belgian part of the North Sea are concentrated on wrecks. These wrecks are scattered on the offshore seabed and can only be reached by motorised boats.

9.4.3 Existing situation

9.4.3.1 Spatial delimitation

The motorised water sports are only allowed outside 200m of the low waterline, except in the assigned launching zones and in case of force majeure.

Source

Ecolas (2000)


Inquiry results of Rudi Baert, responsible for diving activities in the North Sea of NELOS (Nederlandstalige Liga voor Onderwateronderzoek en-sport vzw) (2004)

Maes et al. (2002)

Eliaerts et al. (1998)

Reliability margin

The Ecolas inventory (2000) was based on a survey of the tourist services of the coastal municipalities, the licenses supplied by 'coastal waterways service' and by 'Piloting services', and the concerned legislation.

The text is based on the sources mentioned above, on an information search of literature and websites and a telephone query of the sport services of the coastal municipalities.

Flexibility

The launching zones are well defined.

Future perspectives

The constant dynamism inherent to water sports continuously attracts new groups of consumers to the water (Resource Analysis 2003).

Examples of recent trends in motorised water sport activities include jet-skis, banana-boating (this is an inflated banana which is drawn behind a motorboat), para-sailing (a parachute pulled by a motorboat) and wave-carting (navigating at sea in group with special jet-ski boats).

9.4.3.2 Type and intensity

Intensity per surface-unit

The Ecolas inventory (2000) of commercial and public activities on the coast recorded 13 commercial companies organising offshore excursions in 2000. According to that inventory companies or persons
organising a sea trip with a (amphibian) boat or sailboat are mainly situated in Oostende (6) and Nieuwpoort (4). Further activities are situated in Blankenberge (1), Middelkerke (1) and Zeebrugge (1).

55% of the trips at sea with an (amphibian) boat that are organised by a company or person take place from April to October, 40% are year-round and the rest takes only place in July and August (Ecolas 2000).

According to the federation Waterski Vlaanderen (WSV) none of their member clubs organise waterskiing activities on the Belgian coast. Most of their clubs are situated in the province of Antwerp where they practise their sport on inland water.

According to the NELOS inquiry (NELOS, Rudi Baert pers. comm. 2004) 45 diving clubs (with a total number of 3759 members) go diving in the North Sea. Approximately 1850 dives take place every year. An average dive is 30 to 45 minutes long. The duration of a full diving trip is 12-14 hours. There are generally 2 dives per trip. The wrecks that are regularly dived on include (in order of importance): Trifels, Bruno Heineman, Birkenfelds, Pepinella, Garden City, Tubantia, Paris, Wolf, Hermes, Marthe, etc. The dive clubs jointly use a limited number of boats: Aquarius (21 metres, diesel), Stream (catamaran, 13 metres, diesel, 400 pK, Nieuwpoort, 12 divers, 66 diving days from May to November) and Dive Star (21 metres, diesel, 4-takt/8cylinders, Nieuwpoort, 12 divers).

**Frequency per unit of time**

The WES-inquiry (n=17) 2002-03 (Resource Analysis 2003) shows that speed navigation (motor boating) is practised in 40% of cases, which is several times a week but not daily. Jet-ski activities mainly occur with a low frequency, a few times per year (42.9%) or once every few months (28.6%).

Approximately 1850 dives (reported by NELOS) take place over a total of 438 diving days each year. There are no diving activities from November up to May. In May and October only sporadic dives take place. The peak season for diving is in the warmer months: June, July, August and September (NELOS, Rudi Baert pers. comm. 2004).

**Future perspectives**

The management plan for Water recreation (Resource Analysis 2003) gives an indication of some prospects:

**Water-ski en speedboats:**

There is an EU-emission directive (emission of hydrocarbon) that is presently being completed, which will result in many present out board motors becoming illegal. As a result people will need to convert to more expensive types of motors, and it is expected that the number of practitioners will decline. It is also feared that the sport will become more elitist (Resource Analysis 2003).

At present the EU-standard (emissions), which is applicable to all new boats, determines that the maximum allowed noise limit is 90 dB (A). Also of importance are the emission standards or the noise limits, which are measured from shore (Vlarem). These are dependent of the type of area and the time of the day.

---

6 This relates to the proposition that the European Commission filed on October 2000 to enact a Directive regulating exhaust and noise emissions from the motors of pleasure vessels.

7 Emission standards are location specific noise limits (qua spatial zoning) measured from the shore at certain times of the day.
Jet-ski:

Since the beginning of the jet-ski-sport there has been public fear towards the sport. People are fearful of the noise and the speed of the vessels. This is nourished by negative publicity that the sport gets from the media. The past years have only seen a couple of accidents resulting from unsound jet-ski behaviour.

The increased level of organisation of the sector (among others in the form of the BJSBA) has contributed in the mean time to a sort of code of conduct and self-regulation of behaviour within the sector.

Alternative speed navigation categories:

Besides the more common speed navigation forms such as water-skiing, jet-skiing and navigating with a speedboat, some less known and variants have emerged over the past few years, such as 'knee-boarding', 'para-sailing', 'air chairing', 'surfing' and 'surf jetting'.

All these activities can be practised within the designated zones for speed navigation. However, not all these activities can be practised at the same time on the same water surface, because of the requirement for specific water conditions (with or without waves) and the specific behaviour of the sports people during the activity (e.g. straightway vs. Unpredictable). Para-sailing is an activity that is often practised at the coast. Practical and safety considerations require that there are, amongst other things, no trees, buildings or high voltage cables in the near surroundings of the parachute (Resource Analysis 2003).

The main threat to these types of speed navigation is the number of practitioners of this sport (Resource Analysis 2003). Often they originate as an experiment on already existing types of speed navigation such as water-skis. After this time there is a sudden increase in the number practitioners (often youthful), whose enthusiasm is fuelled by advertising and fashion. Subsequently many of these types of speed navigation activities pass away quietly, as new variants appear. Some variants grow to complete water sports in their own right, such as wake boarding.

Alternative speed navigation activities face similar issues to more regular types of speed navigation, such as the number of speed navigation zones and environmental regulations.

Passenger- and pleasure navigation:

The Water recreation plan (Resource Analysis 2003) states that an increase of the number of sailing yachts is expected in the future, as a result of increasing purchasing power and the evolution to more active leisure activities in a natural setting. The growing interest can be correlated to the growing number of students getting a degree. The number of sailing schools is also increasing.

There has also been a shift to bigger and more exclusive ships. Thanks to all of these developments the marinas have experienced an increasing need for extension of capacity. The existing infrastructure of marinas is being extended, but this still doesn't meet rising demand.

At the same time some marinas have experienced an ageing membership. To address this marinas have introduced new activities to attract more young people (traineeships, putting boats at their disposal), and to persuade the existing members to become involved in more activities (sailing competitions, tour navigation in-group). The activities of the sea scouts are important in this light for arousing interest in water and navigation from a young age, which augments a new generation of recreational navigators (coastal).

The Water recreation plan (Resource Analysis 2003) further notes that the passenger navigation sector is just starting to organise itself. Recently owners of the vessels used for passenger navigation united
themselves in a Flemish Federation for Passenger navigation, and in a Flemish consultation- and advice committee on passenger navigation. Generally it is thought passenger navigation will continue to grow.

There is also a trend of working with themes. Some ship owners utilise themes to be able to distinguish themselves from competitors. Theme navigation is not so widespread in Flanders. The environmental boat has already gained some fame, but other projects are less well known. At present there are several original initiatives including: company receptions, marriage parties,... etc, but there are still many possibilities. The high cost of renting a passenger vessel and crew is still the most important factor inhibiting demand for this type of product.

In some locations the expansion of recreational navigation can lead to environmental nuisances including water pollution, noise disturbance, disturbance of non-motorised water recreation, etc. Nuisances can range from such things as exceeding the maximum speed to the dumping of rubbish during time trips.

9.4.3.3 Data gaps

It has to be noted that although there are several studies available on water recreation (i.e. inland and coastal waters), there are significant data gaps concerning the motorised coastal water sports in Belgium. Studies such as the Management plan Water recreation ((Resource Analysis 2003), of the Waterways and Maritime Affairs Administration (Ministry of the Flemish government), give useful information from surveys of water recreation in Flanders (practised frequency, expenditure, annoyances, etc.). But additional inquiries and studies need to be undertaken in order to build up coastal-specific parameters. Furthermore, the existing studies give little or no insight into the density or in the geographical distribution of the activities.

Resource Analysis (2003) undertook an interesting study concerning the economic impact of the water recreation. This study gave useful numbers for yearly turnover including, coefficients to calculate added value and employment (based on turnover) and a coefficient to calculate the percentage of capital that finds its way back to the government through taxes and (excise) duty. In addition regional input-output models have to be available to determine which share of the added value, employment ... etc is generated in Flanders (at the coast). However, specific research data on Flemish/coastal level is lacking.

The number of vessels circulating in the Belgian part of the North Sea is another interesting parameter. This parameter was reconstructed in a study based on registered matriculation plates in Belgium and an estimate of the part in possession of foreigners and an estimate of boats possessed by Belgians which are abroad (Resource Analysis 2003).

In addition to the above information, the number of practitioners that are members of a water sport association and -clubs underlines the considerable size/magnitude of the coastal sector. Again figures for Flanders as a whole are available, but not specifically for the coastal region.

9.4.4 Interactions

9.4.4.1 Suitability for user

**Biological**

No restrictions

**Geological/physical**

No restrictions
Hydrological

No restrictions

9.4.4.2 Impact on other users

Spatial conflict

Yacht – and sailing clubs:

The marinas at the coast have a total surface area of 188100 m². The main port is Nieuwpoort (56% of the total surface). The marina in Oostende represents 25% of the total surface. The one in Blankenberge represents 15%, while Zeebrugge only possesses a small percentage of the total marina surface on the Belgian coast (Ecolas 2000).

Table I.3.9l: Overview of yachting- and sailing clubs (source Ecolas 2000) and number of landings (Source: Luc Geirnaert, Verbond van Vlaamse Watersportverenigingen (VWW) pers. comm.)

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Club</th>
<th>Number of landings</th>
<th>Surface (m²)</th>
<th>Total surface (m²)</th>
<th>%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Water (m²)</td>
<td>Ground (m²)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blankenberge De Smet De Naeyerlaan 68</td>
<td>Vissersfolklore Ontspanning Na Arbeid</td>
<td>?</td>
<td>2000</td>
<td>0</td>
<td>1.06%</td>
<td>15.03%</td>
</tr>
<tr>
<td>Blankenberge Havenplein 3</td>
<td>Scarphout Yachtclub Blankenberge VZW</td>
<td>250</td>
<td>9045</td>
<td>1390</td>
<td>5.55%</td>
<td></td>
</tr>
<tr>
<td>Blankenberge De Smet de Naeyerlan 1</td>
<td>Vrije Noordzeezeilers</td>
<td>150</td>
<td>5039</td>
<td>0</td>
<td>2.58%</td>
<td></td>
</tr>
<tr>
<td>Blankenberge Oude Wenduinsesteenweg 4</td>
<td>V.V.W. Blankenberge</td>
<td>655</td>
<td>7600</td>
<td>3200</td>
<td>5.74%</td>
<td></td>
</tr>
<tr>
<td>Nieuwpoort Halvemaanstraat 2b</td>
<td>Watersportkring van de Luchtmacht VZW</td>
<td>370</td>
<td>16000</td>
<td>31820</td>
<td>25.42%</td>
<td>55.92%</td>
</tr>
<tr>
<td>Nieuwpoort Krommehoek</td>
<td>Koninklijke Yachtclub Nieuwpoort VZW</td>
<td>350</td>
<td>14060</td>
<td>0</td>
<td>7.47%</td>
<td></td>
</tr>
</tbody>
</table>
Marinas on the Belgian coast are in high demand, when examined in terms of the demand for berths and their occupation. According to available estimates there is an increasing shortage of berths in coastal marinas. Bardyn (2001) estimates the current deficiency to be 1879 units (Resource Analysis 2003).

Besides the fact that there has been a shift to bigger and more exclusive ships, there is also a demand to more berths. Marinas have extended their capacity to address the shortage of berths. Nevertheless, the extended infrastructure of marinas still doesn't meet demand (Resource Analysis 2003).

**Intensity conflict**

**Soft types of recreation:**

It is difficult to practise speed navigation at the same time as “soft“ types of recreation like kayaking because of the waves and safety matters.

**9.4.4.3 Impact on environment**

**Biological**

The existence of several types of speed navigation and the location-specific possibilities for expansion are subject to the location-specific emission standards (noise limits) measured from shore at certain times of the day.

**Geological/physical:**

Navigating with motorboats contributes to acoustic disturbance. While concrete information about the effects is missing and it is assumed that these effects are limited. The visual disturbance by recreational navigation can be calculated by combining the number of boats in the summer season with the geographical distribution of recreational navigation.

**Hydrological:**

No relevant impact is to be expected.
**Toxic pollution:**

The Risk Analysis Marine Systems (RAM) gives information concerning the possible emission of oil with benzoapyrene (BaP) and fluoranthene (Flu), Copper, Zinc, Lead and TBT. These pollutants mainly come from cabin sailing boats (Maes et al. 2002).

The speed at which organotin associations/connections leach out from anti-fouling paints depends on the type of paint used. Self-grinding paints especially leach during navigation and to a lesser extent when lying idle. Conventional paints leach continuously. Contrary to professional navigation, mainly conventional paints are used in recreational navigation, as these vessels mainly lie idle. During periods of lying idle and the cleaning of the boats, TBT can be introduced into the harbour. The water in the marinas is being renewed due to tidal movements and thus it forms a source of TBT-load to the North Sea. The study mentioned calculated a mean emission of 1 g TBT daily during lying idle and 2.5 g TBT daily during navigation, for a cabin sailing boat of 40 m². Since 1989, TBT-containing paints have been banned by Europe on sea-going vessels under 25 m (mainly recreational vessels) (Directive 89/677/EC). The International Maritime Organization (IMO) adopted an Assembly Resolution in November 1999 and a Convention in 2001, to ensure a global ban on the application of organotins in antifouling paints in new coatings by 2003 and its presence on every vessel in service by 2008. This ban has been endorsed by the European Community in Regulation 782/2003/EC.

Zinc in the form of zinc-anodes is used in recreational navigation as cathode protection. The zinc-anode dissolves slowly and thus prevents corrosion of the metal parts such as the screw propeller and the ship's shell. It is estimated that approximately 50% of Dutch vessels at sea are protected by a zinc-anode, and zinc emissions amount up to about 600 g yearly per vessel (Maes et al. 2002). Similar numbers are to be expected for Belgium's recreational vessels. In recreational navigation “bronze-bottom” paint is used which contains copper. It is not known, however, how many of the total amount of sea-going recreational vessels in Belgium uses copper-containing paint.

Possible sources of BaP and Flu in recreational navigation are leaching and wastage of the ship’s skin (from anti-fouling tar products), and exhaust fumes from both outboard- and inboard motors. For Dutch recreational vessels a mean emission was calculated from the ship’s shell as 0.11 g BaP and 3.4 g Flu yearly per vessel. The recreational navigation on the North Sea consists mainly of cabin sailing boats and only for 5% of motorboats. The total emission of BaP and Flu from recreational navigation appears to be relatively small and is determined by emission from the ship’s skin (Maes et al. 2002).

Gasoline and diesel fuel may contain lead. This lead can end up in the seawater with the exhaust fumes. Inboard motors excrete 85% of the exhaust fumes under water and outboard motors 100%. Lead additionally ends up directly in the sea through angling. This lead, however, sinks quickly into the soil where the leaching velocity of lead is very low (Maes et al. 2002).

**Eutrophication:**

A Dutch study calls the contribution of NOₓ to the North Sea by recreational vessels negligibly small (KNWV 1991). It can be assumed this is also the case for the Belgian part of the North Sea.
Oil pollution:

The use of outboard motors (lubrication) in recreational navigation leads to an emission of oil to the surface water. The emission to the water was calculated as being 5.2 g oil per kg of gasoline (Van Bentum 1993). Based on the assumption that one kg of drained oil per day gives rise to the formation of an oil slick of 0.5 m², the surface of the oil film can be calculated (oil film of 0.0026 m²).

9.4.4.4 Impact socio-economy

Economic

Awareness is growing that leisure time recreation and tourism are not only a cost to a municipality or region, but also a source of revenue and employment. Coastal recreation (water) and tourism can be an important catalyst for economic development for certain regions.

Table I.3.9m: General overview of the total returns of motorised water sport activities inventoried by Ecolas in 2000

<table>
<thead>
<tr>
<th>Nature of activity</th>
<th>Return (EURO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maiden trips and boat trips</td>
<td>1244587</td>
</tr>
<tr>
<td>Rental of sailboats and sailing cruises</td>
<td>520576</td>
</tr>
<tr>
<td>Yachting- and sailing clubs</td>
<td>2542987</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>4308150</strong></td>
</tr>
</tbody>
</table>

Table I.3.9n: Detailed overview of the assessment of the return of trips at sea inventoried by Ecolas in 2000

<table>
<thead>
<tr>
<th>Organisator</th>
<th>% time usage</th>
<th>Number of days yearly</th>
<th>Frequency daily</th>
<th>Cost price EURO</th>
<th>Maximum participants</th>
<th>Correction</th>
<th>Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dalle Fernand</td>
<td>80%</td>
<td>62</td>
<td>7</td>
<td>3</td>
<td>40</td>
<td>28</td>
<td>29165</td>
</tr>
<tr>
<td>Zeezeildopen de Bon Vivant</td>
<td>80%</td>
<td>154</td>
<td>3</td>
<td>13.14</td>
<td>12</td>
<td>12</td>
<td>58279</td>
</tr>
<tr>
<td>VW Sailing Team</td>
<td>80%</td>
<td>180</td>
<td>3</td>
<td>23.8</td>
<td>50</td>
<td>35</td>
<td>359856</td>
</tr>
<tr>
<td>Seastar (zomer)</td>
<td>80%</td>
<td>62</td>
<td>2</td>
<td>16.61</td>
<td>150</td>
<td>105</td>
<td>173010</td>
</tr>
<tr>
<td>Vanhoutte Ronny</td>
<td>80%</td>
<td>62</td>
<td>11</td>
<td>3</td>
<td>40</td>
<td>28</td>
<td>45830</td>
</tr>
</tbody>
</table>

8 Reckoning with the rental price and duration of the activity.
Table I.3.9o: Detailed overview of the assessment of the turnover of yachting- and sailing clubs inventoried by Ecolas in 2000

<table>
<thead>
<tr>
<th>Yachting club</th>
<th>Number of landing stages</th>
<th>Turnover</th>
<th>Surface (m²)</th>
<th>Retribution</th>
<th>ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercator jachthaven</td>
<td>320</td>
<td>237978</td>
<td>36015</td>
<td>44639.43</td>
<td>18.76%</td>
</tr>
<tr>
<td>V.V.W. Eurojachthaven Nieuwpoort</td>
<td>1000</td>
<td>743681</td>
<td>43300</td>
<td>53668.95</td>
<td>7.22%</td>
</tr>
<tr>
<td>North Sea Yachtclub</td>
<td>120</td>
<td>89241.7</td>
<td>3261</td>
<td>4041.904</td>
<td>4.53%</td>
</tr>
<tr>
<td>Royal Yacht Club</td>
<td>200</td>
<td>148736</td>
<td>10370</td>
<td>12853.28</td>
<td>8.64%</td>
</tr>
<tr>
<td>Koninklijke Yachtclub Nieuwpoort</td>
<td>350</td>
<td>260288</td>
<td>14060</td>
<td>17426.91</td>
<td>6.70%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>188100</strong></td>
<td><strong>233144</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Turnover</strong></td>
<td></td>
<td><strong>2542987</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The turnover of inventoried yacht- and sailing clubs amounted to 2.543 Mio EURO (value 2000), and was mainly derived from 'landing stage' charges (Ecolas 2000).

The total impact of coastal marinas on the economy is much higher than the estimated returns, because of the many indirect effects (purchase of boats and material, hotel and catering industry, provision of services, tourism ... etc). The study estimates that the total added value of coastal marinas to be about 25.26 million euros (Resource Analysis 2003).

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9 Extrapolation to all inventoried maiden trips and boat trips. (only of the 7 activities in table 2 numbers were known)

10 Retribution is 1.24 EURO/m²
The total inventoried public and commercial activities which require a permit (Ecolas 2000) in the sea area of Belgium generate income for about 150-200 people. In summer months this can rise due to hiring of students.

**Occupancy rate in the coastal marinas:**

At present there is little accurate data available concerning the tourist activity in the marinas (Maes et al. 2002). According to estimates of the province of West-Flanders, yachts yearly realise 340000 overnight stays, with a mean occupation of 3 persons per night per vessel and approximately 30 overnight stays in the home port (or another port along the Belgian coast)\(^\text{11}\).

**Turnover in the marinas:**

There is virtually no data available regarding the expenditure of coastal tourists that are accommodated on their yacht in the coastal marinas. Therefore, only a very rough estimate can be made of the turnover in the marinas. Expenditure can be classified in yearly recurring costs on the one hand and expenses during the stay in the marina on the other hand. The Province of West-Flanders estimates the expenditure per night to be about 32 euro for stays overnight aboard yachts. The fixed cost per vessel is estimated at about 1735 euro yearly\(^\text{12}\) (Maes et al. 2002).

**Table I.3.9p: Estimate of the return in coastal marinas, 2000 (Source: estimates by Westtoer 2002, Province West-Flanders)**

<table>
<thead>
<tr>
<th>Units</th>
<th>Expenditures per unit (€)</th>
<th>Total estimated expenditures (mio €)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed costs (3.057 vessels)</td>
<td>1735</td>
<td>5.3</td>
</tr>
<tr>
<td>Overnight stays (340.000)</td>
<td>32</td>
<td>10.9</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>16.2</td>
</tr>
</tbody>
</table>

The total yearly turnover from coastal marinas is estimated to be 16.2 million euro. However, this number doesn’t take into account visitors from other marinas that spend the night on the Belgian coast. Besides this, the presence of a marina plays an important role in the attractiveness of a coastal community\(^\text{13}\).

It is clear that the socio-economic interest of overnight stays in the coastal marinas cannot be correctly reported and that further research is required.

The WES inquiry (Resource Analysis 2003) divided the mean annual expenditures for sailing in the following categories (Table I.3.9q).

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\(^{11}\) Strategisch Beleidsplan voor toerisme en recreatie aan de Kust, o.c., p. 156.

\(^{12}\) Strategisch Beleidsplan voor toerisme en recreatie aan de Kust, o.c., pp. 160-161

\(^{13}\) Strategisch Beleidsplan voor toerisme en recreatie aan de Kust, o.c., p. 156.
Table I.3.9q: Mean annual expenditures for sailing, WES-inquiry 2002-2003 (in Euro)

<table>
<thead>
<tr>
<th>Sailing</th>
<th>Mean annual expenditures per boat (in Euro)</th>
<th>Number of observations in the sample</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membership</td>
<td>1045</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>Maintenance of the boat</td>
<td>1135</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Fuel</td>
<td>70</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Insurance</td>
<td>360</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Landing costs</td>
<td>680</td>
<td>2</td>
<td>Mean annual expenditures per boat if the boat ties up in another port then the home port</td>
</tr>
<tr>
<td>Course fees</td>
<td>800</td>
<td>2</td>
<td>Mean annual expenditures per person if lessons are followed</td>
</tr>
</tbody>
</table>

**Social**

Companies/persons organising a (amphibian) boat trip don’t have a fixed clientele and are dependent on weather conditions. Vessels such as the ‘Seastar’ and ‘Euroline’ can go on in less favourable weather conditions. Sailing trips are on the other hand more dependent on the weather. Most sailing trips occur between the first half of April and the end of September, because the weather conditions are best during this period. Sailing trips organised in the early- and late season are largely on appointment or only take place during the weekends. Cruises organised by shipping companies mainly bring together day-trippers or people on holiday at the coast.

Activities relating to sailing and yachting have a fixed, broad clientele. That means only persons interested in this activity participate in these activities, but the age is very diverse. Clubs and associations bring together many people. They don’t restrict their activities to the summer months but are virtually year round accessible to the public. This is certainly true for yachting- and sailing clubs.

The sailing- and yachting activities thus attract a specific audience while conversely sailing and pleasure cruises have a broad audience.

The inquiry (WES 2002-03, n=47) shows that 72.3% of the sailors in Flanders are a member of a water sport club.

In Flanders 25% of the respondents (n=128 other activities on the water) are members of a water sport club (WES-inquiry 2002-03).
9.5 REFERENCES


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