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**The significance of coastal tourism in maritime economies**

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1. Introduction

Since the 1970s, the significance of maritime activities for national economies is an issue which is taking up an increasing importance as coastal states are confronted with the need for designing maritime policies, including critical topics such as maritime transport regulation and the management of coastal zone management, tourism flows, marine environment and marine resource and energy exploitation. To do this, they need to have a correct knowledge of the contribution of the maritime economy to the formation of GDP through its various components.

Several studies have undertaken to assess this contribution. The exercise was frequently performed on a national and/or regional basis. It requires delimiting the scope of the maritime economy, identifying maritime-related sectors and defining a set of indicators used to assess their economic size and labour intensiveness. Defining geographical areas where maritime activities are located is important for identifying maritime-related businesses especially for coastal tourism; it is also important for appraising the significance of the sea-related economy for coastal areas and employment.

The earliest studies have been conducted on the US maritime industries by the US Bureau of Economic Analysis in the 1970s. Other US studies followed in the 1980s and 1990s and more recently through the National Ocean Economics Project<sup>1</sup>. UK's, Italy's and France's reports were among the earliest contributions in the EU<sup>2</sup>. In the 1990s, reports were also issued on Norway and the Netherlands<sup>3</sup>, on EU-15 & Norway<sup>4</sup>, on non-EU countries such as Australia<sup>5</sup>, Canada and Canadian Provinces<sup>6</sup>, on EU regions<sup>7</sup>, and at world scale<sup>8</sup>. Several of these contributions, including those of the US, UK, Canada and France, are periodically updated with different time periods.

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<sup>1</sup> See Kildow et al. (2000) for references to early works by BEA and others, and to the NOEP; Kildow and Colgan (2005) for implementation of NOEP on California's economy.

<sup>2</sup> Pugh and Skinner (1996), Federazione del Mare (1996), Kalaydjian (1997).

<sup>3</sup> Wijnolst et al. (2003).

<sup>4</sup> PRC and ISL (2001).

<sup>5</sup> Allen (2005).

<sup>6</sup> Several studies in the 1990s and 2000s including RASCL (2003) and GSGislason (2007).

<sup>7</sup> For Schleswig-Holstein see Ministry of Sciences (2005).

<sup>8</sup> Douglass-Westwood (2005).

As part of the Action Plan adopted in 2007 further to the "Blue Book" communication on the European Integrated Maritime Policy<sup>9</sup>, the European Commission is currently sponsoring and monitoring a study which aims at developing an economic and social database of EU Maritime Affairs. The work in progress can be seen as an EU-wide extension of national reports on EU member states.

By and large, these studies have proven useful exercises:

- They help to identify the components of the maritime economy and to clarify their definition;
- They permit to analyse direct and indirect links between the maritime activities and the rest of the economy;
- They help to quantify the contributions of the different components of the maritime economy in terms of GDP and employment and other key economic values such as taxes generated and induced effects;
- They contribute to analyse the concept of maritime economy with a view to designing an integrated maritime policy with a scope going beyond a simple compilation of sector-related policies by taking account of the interactions between maritime sectors.

These studies raise practical and methodological issues in relation to the valuation of the different components of the maritime economy, notably to coastal tourism:

- One is related to the lack of maritime-specific indicators for several maritime activities, those being only small components of larger activities not specifically related to the sea. For example, the naval equipment manufacturing industry supplies shipbuilding with key material (painting, electronic gear, engine, etc.) for which shipbuilding is only a market among many others without specific links to maritime markets. The core of the problem is that national accounts are not designed to isolate maritime-related activities as such; those may be merged in sectors defined regardless of any maritime-related criterion and which overlap the maritime domain. This is notably true of coastal tourism businesses: travel agencies, restaurants and leisure activities.
- There is therefore a real problem with the accessibility of data, all the more that the maritime components of activities may be of relatively small size and are extremely diverse.

Coastal tourism is an economic sector which has been identified as a major one for the maritime economy. Its significance has become a matter of assessment at national and regional levels in Europe, given the growing economic importance of tourism in general, coastal tourism accounting for a significant share of the total amount.

The objective of this paper is to show how coastal tourism is analysed in maritime economy studies, and to point out methodological issues raised by these exercises. Attention will be drawn to European and North American studies.

## 2. The problem of coastal tourism assessment

### 2.1. Specificities of coastal tourism as compared to the other maritime activities

It is well known that tourism is supplied by many business to consumer services of very different size and largely characterised by the nature of consumption: "tourism" with either

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<sup>9</sup> European Commission (Oct. 2007a, Oct. 2007b).

leisure or business purposes. This category includes a set of final products, among which a number of services and retail goods purchases. In this respect, coastal tourism does not differ from tourism in general.

Coastal tourism raises two main difficulties in terms of definition:

- Its geographical delimitation: to which extent tourism should be considered coastal?
- Its industrial delimitation: which activities should be considered coastal tourism related? If certain activities are easily identified as tourism-specific, others remain difficult to classify: for instance which share of transport should be taken into account?

## 2.2. Assessment of coastal tourism

The assessment methodology for coastal tourism is generally rough owing to the lack of reliable data and the difficulty to estimate the coastal components of tourism when detailed tourism statistics exist. This section presents the method for France, and those for California and Canada as a point of comparison. Alternative methods, not presented herein, limit the assessment to certain tourism industries, in particular the boating service chain and marinas<sup>10</sup>. Finally, the work in progress for the EU will be briefly summarised.

### 2.2.1. Assessment for France

The general objective of the Ifremer biennial report (Kalaydjian, 1997, 2006) is to present a comprehensive assessment of the French maritime economy combining the study of maritime industries and of the public sector. The industries primarily include seafood and aggregate resource extraction, manufacturing, construction, shipping, ports, tourism and insurances. The public sector includes the Navy, governmental administrations (signals, safety, social insurances), education, protection of marine and coastal environment, and marine science.

The report characterizes the situation of each maritime activity by turnover, value added and employment; government expenditures are also reported for public sector activities. The series of these key indicators cover the recent past years, generally a five year period. Additional data are provided on export rates, the demography of enterprises, and future outlook of businesses. The work is essentially done at national level; a few data are reported on maritime regions.

In the report, coastal tourism is defined as the full set of visitors' coastal (onshore and offshore) activities. The approach follows that of the French Directorate for Tourism, the difficulty being that little data is available for this sub-sector of tourism. To make the assessment of coastal tourism, excluding locals' leisure activities, the Ifremer report largely relies on Tourism Accounts and on the "SDT"<sup>11</sup> visitor survey monitored by the Tourism Directorate.

- Tourism spending is defined as the amount of stay generated expenditures<sup>12</sup>, to the exclusion of components unspecific to any tourism geographical area, namely visitors' travel expenditures, durable goods purchases and tour operators' purchases. Tourism spending is split by category (coast, mountain, countryside, cities) based on a breakdown following the SDT survey of residents. In the absence of similar details for non-residents,

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<sup>10</sup> For the Netherlands and EU & Norway, see PRC and ISL (2001), and Wijnolst et al. (2003).

<sup>11</sup> SDT "Suivi du déplacement des touristes": annual survey of a panel of 20,000 visitors.

<sup>12</sup> "T1" aggregate of tourism consumption as defined in Tourism Accounts.

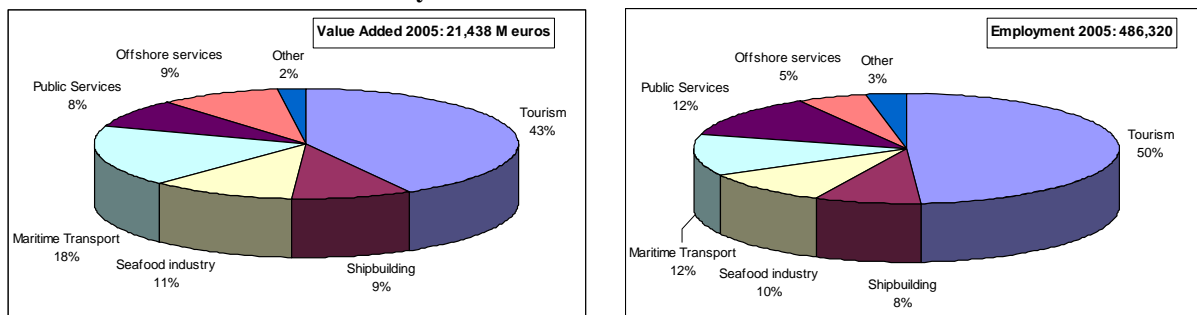
the Ifremer report extrapolates this breakdown to the visitor population as a whole. Coastal tourism spending obtains this way and considered as coastal tourism services turnover.

- The value added / turnover rate for coastal tourism is estimated on the basis of the average VA / turnover rate for tourism-specific services, i.e. an aggregate which includes coastal and non coastal accommodation, restaurants and travel agencies. There is scope for refining this estimation by better selecting the set of services involved.
- Employment for tourism as a whole is inferred from labour statistics of the "Unedic" Unemployment Insurance Organisation. The number of FTEs<sup>13</sup> is roughly split by tourism category, including coastal tourism, on the basis of consumption ratios.

These estimates need improvement, especially as regards value added, on the basis of a more systematic and regular breakdown of coastal tourism spending, in line with the standard classification of industries and services. This would require an appropriate visitor survey on a yearly basis.

Despite the weaknesses of the estimates, the results are telling (Chart 1). Coastal tourism accounts for nearly 50% of the maritime economy in terms of value added and employment. This is partly explained by the attractiveness of the French coast. Another important reason is that certain industries which play an important role in other EU countries, especially in northern Europe, such as manufacturing, shipping, ports, shipbuilding and oil industry, have a relatively limited weight in France. Maritime insurance, boat building and cable manufacturing are very competitive industries in France but are not of massive importance in absolute terms. On the other hand, offshore services are taking up an increasing importance.

**Chart 1. France's Maritime Economy in 2005**



Source: Ifremer, French Marine Economic Data 2007.

The regional dimension of coastal tourism is another issue. It was addressed in the 1999 and 2000 editions of the Ifremer report. A breakdown of coastal tourism expenditures by regions was attempted, based on a specific visitor survey on a sub-panel, aged 15 or over, extracted from the SDT panel of 20,000 respondents. The purpose of the questionnaire on summer tourism spending<sup>14</sup> was to split purchases by main categories of goods and by main groups of regions.

The findings (Table 1) show that about 44% of the summer coastal tourism spending took place on the Mediterranean coast in 2000, 26% in the regions of Provence-Alpes-Côte d'Azur

<sup>13</sup> FTE: full time equivalent.

<sup>14</sup> July, August and September tourism spending.

and Corsica alone. The Atlantic coast totalled 31% of the spending and Brittany 17%. In 2000 the greatest expenditure per night was 47 euros for Provence-Alpes-Côte d'Azur and Corsica. This specificity was attributable to accommodation and the round trip. PACA & Corsica was the top region on the French coast in terms of tourist generated spending, thanks to large visitor numbers and average spending which was higher than elsewhere. The lowest expenditure was found in Aquitaine and Brittany. For all region groups, the consumption items varied within a narrow range. The relative budget distribution was stable from one region group to another, with a few exceptions. Not including all-in packages, accommodation was the most expensive item in the consumption structure.

**Table 1. Total expenditures and average expenditures per night for all coastal stays in 2000**  
Units: euros and %

	Total expenditures	Average per night								
		All-in package	Accommodation	Meals	Personal leisure activities	Consumers goods	Food shopping	Round journey	Trips	Total, not including all-in packages
Picardie, Lower Normandie, Upper Normandie, Nord-Pas de Calais	8%	39,0	9,3	8,2	4,7	11,6	5,6	3,4	1,7	44,5
Pays de la Loire, Poitou-Charentes	21%	33,7	11,1	6,1	5,2	8,4	5,6	3,0	1,4	40,9
Brittany	17%	51,1	10,1	6,1	4,3	8,7	4,9	3,7	1,4	39,0
Aquitaine	11%	31,9	9,6	6,1	4,0	8,5	4,9	3,8	1,7	38,6
Languedoc-Roussillon	18%	24,8	10,4	6,7	4,6	8,1	5,0	3,7	1,4	39,8
Provence-Alpes-Côte d'Azur, Corsica	26%	41,9	11,9	6,9	5,6	9,1	4,9	6,6	2,1	47,1
Total for France	100%	36,6	10,7	6,6	4,7	8,7	5,2	4,1	1,7	41,6
Total, not including all-in packages			25%	16%	11%	22%	12%	10%	4%	100%

Source: Ifremer, French Marine Economic Data, 2001.

### 2.2.2. Assessment for California

In the NOEP report on California's maritime economy<sup>15</sup>, coastal tourism includes tourism-specific activities taking place in coastal areas and in coastal waters: recreation and ecotourism services, facilities and stores; boat dealers and boating services and ports; restaurants, bars and accommodation; coastal water sport industries, including fishing.

The report estimates the market value of coastal tourism activities in California, based on:

- Data from the Bureau of Labour Statistics providing employment, value added and wages per category of industry<sup>16</sup> for the abovementioned activities in the state of California;
- Data from California's Travel and Tourism industry accounts which provide estimates of travel and tourism spending at state level and per county, and estimates of their impacts in terms of employment and wages;

<sup>15</sup> Kildow and Colgan (2005).

<sup>16</sup> Categories as based on the SIC Standard Industrial Classification until 2000, then on the NAICS North American Industry Classification System.

c) Estimates of employment, value added and wages for coastal counties alone, as inferred from (a) and (b). They are used as estimates of key figures for California's coastal tourism.

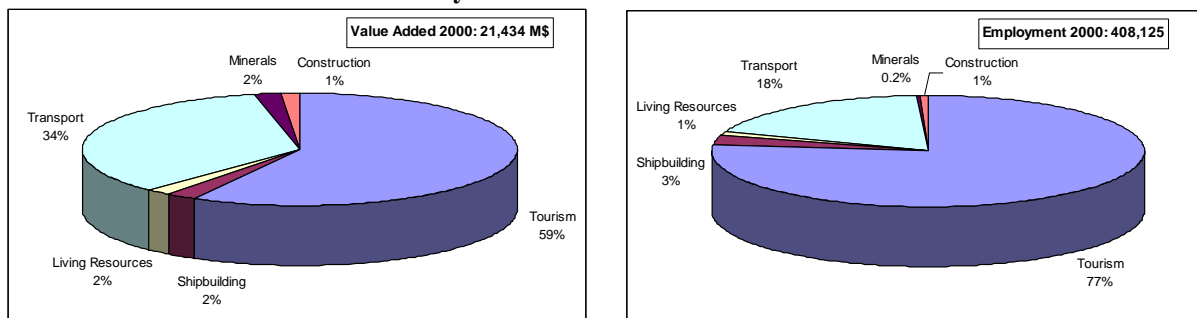
To summarize, the methodology of the report rests essentially on the allocation of visitors' expenditures on tourism-specific industries as provided by California's accounts, and on estimates of earnings/spending ratios per tourism industry, applied to coastal counties.

The above estimates summarize the "direct" impacts from coastal tourism. Additionally, a model permits to estimate "indirect" impacts on suppliers of coastal activities, and "induced" impacts generated by earnings, especially wages, in coastal businesses, generated in turn by visitors' expenditures.

The "non-market value" of coastal tourism is generated by consumers' surplus, because visitors place a value on coastal leisure which is above their expenditures, i.e. above the commercial impacts of visits. The estimation of the non market value is based on a visitor survey<sup>17</sup> carried out in 2000, and on literature contributions estimating the non market value of beach visits for recreational activities.

NOEP aims therefore at a complete picture of coastal tourism's impacts on California's economy, based on the different categories of values generated by coastal tourism: direct value, indirect and induced values, non-market value. To come back to the direct impacts, NOEP's overall results (Chart 2) illustrate the considerable contribution of coastal tourism in California's maritime economy which appears to be largely tourism and transport driven. Note that the activities selected by NOEP as maritime do not include the public sector, in particular the Navy, as opposed to the Ifremer reports.

**Chart 2. California's Maritime Economy in 2000**



Source: Kildow, Colgan (2005).

### 2.2.3. Assessment for British Columbia

For British Columbia (Canada), estimates relate to the broader category of coastal leisure, including tourist and non-tourist<sup>18</sup> activities. The approach of GSGislason (2007) is comparable to that of Kildow and Colgan (2005). Coastal tourism is subdivided into four categories: angling, cruise<sup>19</sup>, ferries and other activities (including boating, sailing, whale watching, scuba diving and beach/shore activities). Estimates of turnover are based on previous studies on angling, industry reports on cruise and ferries, and on ratios linking BC tourism expenditures to coastal-only tourism expenditures. Estimates linking turnover, value

<sup>17</sup> NSRE National Survey of Recreation and Environment.

added and employment per leisure category are based on assumptions made in BC administration statistics for tourism in the province.

In GSGislason (2007), general results are drawn on direct, indirect and induced impacts of maritime activities, in terms of turnover, value added, employment and labour income. Direct impacts (chart 3) show the importance of coastal tourism for BC; it predominates in terms of both value added and employment; transport is the other major component; seafood is also significant for the province.

**Table 2. British Columbia's Maritime Economy in 2005**

	Value added \$5,727 M	Employment 84,430 FTEs
Seafood	12%	13%
Forestry	2%	2%
Ship and boat building	3%	3%
Construction	2%	2%
Maritime High Tech	9%	8%
Coastal Tourism	33%	36%
Maritime Transport	29%	28%
Public Sector	9%	8%
Universities	1%	<1%
Environment non-governmental organisations	<1%	<1%

Public Sector: governmental and provincial administrations Fisheries and Oceans; Defence; Transport; Insurance; Economic Diversification; National Parks; Environment; Agriculture; Energy, Mines and Petroleum; Tourism; Innovation and Science.

High Tech: misc. high tech equipment in acoustics, defence, information and communication technology, instrumentation, platforms; engineering, architecture and environmental services.

ENGOS: NGOs involved in marine and environment related education, research and stewardship.

Source: GSGislason (2007)

2.2.4. A database for the EU Maritime Policy

This sub-section gives a brief overview of the methodological issues of the European Commission's approach to the Maritime Policy database and its coastal tourism components.

The objective of implementing an Integrated Maritime Policy for the EU, combining both competitiveness and environmental sustainability objectives is innovative and challenging in terms of European policy. As a statistical tool for the implementation of the Maritime Policy, the database to be developed will have a common architecture for all member states and will have to be regularly updated.

The architecture of the database includes two major dimensions: a sector by sector inventory of maritime activities and a geographical inventory of coastal and maritime areas.

<sup>18</sup> Tourist: person travelling 80 km or more from normal residence. Non-tourist: local having recreation activities.

<sup>19</sup> In France's report, cruise business is included in maritime transport. Passengers' expenditures in ports are considered coastal tourism related.

- For the inventory of activities, the harmonised statistical tool is the EU's "NACE" statistical classification of activities<sup>20</sup>. The objective is to list all the economic sectors which include a maritime component, to be characterized by key variables: value added, employment, imports, growth rates and prices, from 2000 to the latest available year.
- For the geographical inventory, the tool is the "NUTS" classification of territory units<sup>21</sup>, completed by LAUs local administrative units at city and municipality level. The objective is to identify which EU regions are especially impacted by, and dependent on, maritime activities. Among those, islands require special attention, given their specific development constraints. Using the NUTS, coastal regions will be defined on the basis of appropriate criteria in terms of maritime sensitiveness. The criteria are still in discussion.

By crossing the two data sets, essential information would potentially obtain:

- The most significant maritime activities will be located in terms of coastal regions.
- The maritime sensitiveness of coastal regions will be analysed in terms of essential maritime activities.
- Coastal tourism will be valued by industry components.
- Maritime-sensitive regions, such as islands, will be analysed in terms of tourism dependency and of maritime industry diversification.

However, the limitations of the analysis are explained by the limited availability of data for certain critical sectors, especially coastal tourism:

- Data are available for NACE codes but generally not for subsets (notably maritime subsets) of NACE codes.
- There is a trade-off between NACE- and NUTS-accuracy. At national level (NUTS0), it is possible to have data for NACE-4digits codes, whereas at local level (NUTS3), few figures are accessible, at best for NACE-2 digits codes. Confidentiality is an explanation among others.

The analysis of coastal tourism requires a geographical identification of coastal zones. It is therefore confronted with the two sorts of limitations above. The practical consequence is the inevitable need for estimates of key indicators for coastal tourism. The reports mentioned in the previous sections above show examples of such estimates to replace missing data.

However, the database in preparation is required to comply with quality standards as set by the European Commission<sup>22</sup> and to use data collected by member states on a regular basis rather than estimates. One-off data collection exercises will be shown as examples for further improvements in the database.

### 3. Conclusion

The examples of maritime activity databases existing at national level so far show that the size of the maritime economy remains relatively modest. It is small for France (about 1.3% of the national GDP in 2005) and for Canada (1.48%)<sup>23</sup>, but more significant for BC (3.7% in 2005). Among European countries, UK's maritime economy seems to be one of the most important in relative terms: 4.9% of GDP in 1999-2000 as estimated by Pugh and Skinner (2002), the contribution of the oil industry being a major explanation.

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<sup>20</sup> NACE: Nomenclature d'activités économiques de la Communauté européenne.

<sup>21</sup> NUTS: Nomenclature d'unités territoriales statistiques.

<sup>22</sup> See Eurostat (2003).

<sup>23</sup> See RASCL (2003).

These examples also permit to appraise the significance of coastal tourism, which proves considerable in certain countries (California, France). In the absence of standard assessment method, and given the lack of detailed data on coastal tourism, national assessment strategies remain diverse but commonly based on tourism services accounts, employment statistics and available visitor surveys, the latter providing rough indications on the split of tourism spending and on its "coastal" share.

The assessment of coastal tourism in general and in the EU in particular raises political and technical issues. Politically, the dependence of coastal areas on incomes generated by tourism is an essential question recently addressed by the European Parliament<sup>24</sup>. The EU Maritime Policy database is designed inter alia to provide some solid ground for appraising this dependence. Technically, the problem is about data availability both at sector and local levels to make a correct assessment of such dependency. The inevitable trade-off between NACE and NUTS resolutions make it inevitable to use estimates of economic indicators.

The improvement of the EU database, especially in terms of coastal tourism, requires addressing this difficulty through co-operation between EC and member states' statistical bodies. The objective would be to better characterize coastal tourism businesses in terms of key indicators and of geographical areas.

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<sup>24</sup> European Parliament (2008).

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