

## **CHAPTER 1.**

# **Coastal Urban Environment: a Synoptic View of Resources and Users Across Cases**

**Xuan-Quynh LE, Ahmed Z. KHAN, Koen DE MUNTER, Eric CORIJN  
COSMOPOLIS, Department of Geography, Vrije Universiteit Brussel, Belgium**

## 1. Overview of Case Study Areas

The seventeen study areas in the SECOA project have diverse characteristics, many owing to their different location and history. Thirteen study areas are located in Europe and four are in Asia. They have a diversified background that contributes to their development direction and current situation. Most of the European case-studies have long history that has left marks especially throughout central areas. The most notable is Rome and Brugge, which are two UNESCO sites. Other cities also feature countless archeological and historical heritage. For the Asian case-studies, the most important historical feature is the marks of colonisation periods. Although different in features, all cases have shown a great use of its historical values for tourism development. In the following section, a brief overview of the cases shows the specificity and unique features of each case study area.

### 1.1 Rome Metropolitan Area (Tyrrhenian Sea) (Italy)

Rome, located in the centre of the Italian peninsula, is the capital of the country and the Lazio region. Today, Rome is one of the most important cities in Italy in terms of scientific research. Rome is also a key tourist attraction with more than 20 million visitors in the year 2000. The Rome municipality is at the core of a large metropolitan area. Nowadays the municipality territory of Rome is divided into two areas. On the one side, the central city, within the Aureliano city wall (3<sup>rd</sup> B.C) and, on the other, the external city or the periphery, made up of townships that resulted from the public and private interventions and spontaneous or illegal developments early in the first stages of the urbanisation process. In order to reach the objectives of our analysis the RMA has been divided into three zones, defined as “central city” (core and rest of the central city), “inner suburban ring”, and “outer suburban ring”.

### 1.2 Chieti-Pescara Urban Area (Adriatic Sea) (Italy)

Pescara, the most populated city of the Adriatic coast, is the commercial and administrative centre of Abruzzo region, one of the most dynamic of the last decade thanks to the important historical developments of industrial activities based on the manufacture of metals, furniture, clothes, cement, liquors, pre-cooked-food and dyes, which has allowed the creation of a large number of firms. The territory of the Chieti-Pescara urban area is limited by the sea, at East, and by the National Park of Majella, at West. The central city is constituted by the main cities - Chieti and Pescara - the first one having an ancient origin on the hill, the

second one having a recent origin along the plane and the coast. The Pescara city can be considered as the spontaneous “branch” of the city of Chieti, followed to the technological innovations, which characterised the 20<sup>th</sup> century. In recent years, a new settlement along the Pescara River was created. It is constituted by houses, business parks, shopping centres, industries, without points of discontinuity.

### **1.3 Oostende (Belgium)**

The first study area in Belgium is Oostende, which comprises five communes of the Oostende Arrondissement (out of the 7 communes in total). The whole of the Oostende SA lies within the designated coastal zone of Belgium. The study area comprises a core of three communes (Bredene, Oostende and Oudenburg) and a ring of two communes (Gistel and Middelkerke). Oostende has a total surface area of 250 km<sup>2</sup> and a coast line of roughly 20 km, or nearly a third of the Belgian coastline.

Historically, Oostende region is an old seaside resort that developed from a small fishing village formed since the 8<sup>th</sup> century. During the 10<sup>th</sup> till 14<sup>th</sup> centuries, the area gradually developed with the building of dykes and filling up ditches. The turning point for the area was in the middle of the 15<sup>th</sup> century, when a harbor was built, which attracted tradesmen and shipments from different parts of Europe, as well as Indies and China. At the same time, Oostende port had a strategic position in the religious wars in the 16<sup>th</sup> century. In 1830, Oostende became a part of the new independent Belgium. During the reigning of King Leopold I, the first king of Belgium, Oostende was connected to Brussels in 1838. Also a ferry service between Oostende and Dover (in the UK) was set up in 1846. After the Second World War, Oostende began a transformation into a modern coastal city.

### **1.4 Brugge (Belgium)**

The second case study in Belgium is Brugge (Bruge), with a focus on Zeebrugge, a coastal area of the Municipality of Brugge and in itself a seaport. Brugge is the capital and largest city of the Belgian province of West-Flanders. It is located in the northwest of the country. The historic centre of the city is a UNESCO site. The whole city comprises 13,840 ha, approximately 1,075 of which are found at sea. The economic activities of the city are directly linked to its sea harbour, located in Zeebrugge. The Brugge study area comprises the city of Brugge and several of its 8 surrounding communes. This creates a total study area of over 616

km<sup>2</sup> and a total of over 255,000 inhabitants. The coastline in this study area is roughly 18.5 km long.

The history of Brugge is marked by its connection to the sea. For the development of the city, two sea breaches or transgression were implemented, which created a large creek, several kilometers wide, connecting Brugge to the sea. During the following centuries, the sea retrieved and land began to silt up. Occasional floodings in the first half of the 11<sup>th</sup> century kept Brugge connected to the sea, but also encouraged the building of dykes. These dykes helped Brugge to become one of the most important Belgian cities in the Middle Ages. By the end of the 12<sup>th</sup> century, a town, Damme, developed there, acting as an outer harbor for Brugge. The connection was made through a short channel, the Reie. This marked the beginning of the golden ages for Brugge, which held on until the beginning of the 15<sup>th</sup> century. During the 16<sup>th</sup> till 18<sup>th</sup> century, natural and manmade events closed down those connections. In the 19<sup>th</sup> century, Zeebrugge was created and remains the connection between Brugge and the sea.

### **1.5 Tel-Aviv and Haifa Metropolitan Areas (Israel)**

Israel is situated on the eastern Mediterranean coastline with a coastal front stretching approximately 196 km from the cliffs of Rosh Hanikra in the north to the Gaza strip in the south. With two of Israel's major metropolitan areas on the Mediterranean, Haifa metropolitan area with the Haifa Port at the centre and Tel Aviv the economic core of Israel, pressures on the coast of Israel are immense. Unique attributes of the coast attract diverse uses and users of the coast and demonstrate the immense pressures inflicted upon the coastline, triggering conflicts and competition over the finite coastal supply. Israel's coastal attributes are not dissimilar to other coastlines, however with a shorter coastline and unique attributes due to its geographical attributes, the effects of coastal systems and changes along the coast are greater.

### **1.6 Gothenburg Metropolitan Area (Sweden)**

The delimitation of the Gothenburg case includes the municipalities of Gothenburg and its closest neighbours inland – Partille and Mölndal – making part of the inner and outer ring of the urban centre. The urban centre is surrounded by the coastal municipalities of Öckerö and Kungälv towards the North, and by Kungsbacka to the South forming the outer ring along the coast. The focus of this reporting will be on the municipality of Gothenburg, as it includes both core, inner ring, and outer ring of the urban area. The city of Gothenburg, the second largest city in Sweden, with an area of 3,718.36 km<sup>2</sup> and ca. 500,000 inhabitants, is located at the

Swedish west coast. The location is favorable at the mouth of the river Göta älv offering excellent harbor situation and inland transportation facilities in the river valley.

Gothenburg counted as Swedish town (by Royal privilege) since 1621. The city at the mouth of the Göta river developed around the fortress which dominated its development until the 19<sup>th</sup> century. Between 1800 and 1900 the number of inhabitants went up from about 12000 to about 120,000. Until early 20<sup>th</sup> century sea transport and commerce were the main economic sectors, only then began fast industrialization, which contributed after the First World War to reinforce in-migration and population growth (main industry: metal products). The city area grew throughout 20<sup>th</sup> century through consolidation (integration of surrounding municipalities, the last big administrative reform in the 1970s). After 1970 until the 1900s the population level decreased, only in the year 2000 (466,990) it went over the level of the year 1970 and is since then slowly growing (2009/10: 507,000). The 2<sup>nd</sup> half of 20<sup>th</sup> century brought structural changes in the local economy (reduction of harbour-related economy).

### **1.7 Malmo Metropolitan Area (Sweden)**

The delimitation of the Malmö case study area includes the municipalities of Malmö, Bjurlöv, Lomma, Vellinge at the coast and the inland municipalities of Staffanstorp and Lund. The focus of this reporting will be on the municipality of Malmö and its two coastal neighbours. Malmo is the third largest metropolitan areas in Sweden (after Stockholm and Gothenburg) with an area of 2,535.76 km<sup>2</sup> and a territorial water area of 2,051.02 km<sup>2</sup>. Population (January 1<sup>st</sup>, 2010) of the Malmö municipality was 293,909 people.

Malmö has been a Danish town for several hundred years (mainly developing through the rich fishing grounds in the Öresund) before it became Swedish in the year 1658 in the peace contract of Roskilde. After that Malmö lost economic dominance, only at the end of 18<sup>th</sup> century the port was developed and after that the city grew during the 19<sup>th</sup> century. At the turn of 19-20<sup>th</sup> century the city was technically modernized (electricity, etc.). Between the wars and after World War II the city grew until the 1970s when the economy (shipbuilding, textile industry came into crisis) and the number of inhabitants went down until 1995, when the building of the new Öresund bridge started (opened in 2000).

### **1.8 Mumbai Metropolitan Area (India)**

Mumbai (formerly, *Bombay*), the largest metropolis in India, is the capital of the Maharashtra State in western India. In terms of population, it is the sixth largest city in the

world after Tokyo, New York, Seoul, Mexico City and Sao Paulo. The boundaries of the MMR were originally defined in 1967. These boundaries were marked by natural features such as Vaitarna Creek and Tansa River in the north, Patalganga River in the south and foothills of the Western Ghat (*Sahyadri*) in the east. On the west, they were defined by the Arabian Sea. The region lies between 18° 33' and 19° 31' N latitude, and between 72° 45' and 73° 28' E longitude. The MMR extends over an area of 4,355 km<sup>2</sup> and comprises: Municipal Corporations of Greater Mumbai, Thane, Kalyan, Navi Mumbai, Ulhasnagar, etc.; 15 municipal towns; 7 non-municipal urban centers; and 995 villages. Its administrative limits cover Mumbai City and Mumbai Suburban Districts, and parts of Thane and Raigad District. There are 40 Planning Authorities that are responsible for the micro-level planning of the different areas.

The city rose from being a small fishing hamlet in the 13<sup>th</sup> century to the modern mega city after the concession of the Mumbai group of islands to the Portuguese in 1534 and possession of the island by the British in 1661. In the 19<sup>th</sup> century, economic and educational development in the first half of the 19<sup>th</sup> century, the beginning of the first-ever Indian railway line in 1853 and the opening of the Suez Canal in 1869, established Mumbai as the international port and commercial capital of India. During the British rule, Bombay (present Mumbai) was the capital of Bombay Presidency, encompassing much of the western and central parts of India. Mumbai became the capital of newly formed Maharashtra State in 1961.

### **1.9 Chennai Metropolitan Area (India)**

The Chennai Metropolitan Area or Region (CMR) extends from 12° 50' to 13° 17' N latitude and 80° 0' to 80° 20' E longitude. The CMR comprises: the Chennai Municipal Corporation (174 km<sup>2</sup>); 16 Municipalities (240 km<sup>2</sup>); 20 Town Panchayats (156 km<sup>2</sup>); and 214 villages in 10 Panchayat Unions (617 km<sup>2</sup>). It encompasses the Chennai District (174 km<sup>2</sup>), parts of Tiruvallur District (637 km<sup>2</sup>) and Kancheepuram District (376 km<sup>2</sup>). Chennai (formerly, *Madras*), is ranked as the fourth largest urban agglomeration in India and is the capital of the Tamil Nadu State in southern India.

The city of Madras (present name Chennai) was a small fishing village known as *Chennaipatnam*, before the British East India Company acquired it in 1639. The laying down of a railway line in 1864 and the completion of the harbour in 1896 converted the non-descriptive village of Chennaipatnam into a flourishing trade and commerce center in the late 19<sup>th</sup> century. The Corporation of Chennai (or Madras) is one of the oldest municipal bodies in India. It was established in 1687. During the British rule, Madras was the capital of Madras Presidency. It

became the capital of Tamil Nadu (earlier Madras) State in 1947. Today Chennai is recognized as the major export hub in South East Asia and a major automobile manufacturing center in India.

### **1.10 Hai Phong City (Vietnam)**

Haiphong is situated on the northeastern coast of Vietnam, about 100 km east of Hanoi Capital. It is the third largest city in Vietnam and possesses the largest seaport in the northern part of the country. It covers an area of 1,519 km<sup>2</sup>, including two island districts (Cat Hai and Bach Long Vi). Haiphong has a large coastal and sea area, favorable for marine economic development. Haiphong is the most important commercial and transportation hub in northern Vietnam, connecting the Northern provinces with the world market through its seaport system. Other parts of the country are connected to Haiphong by road, railway, inland waterways, maritime and air links.

The formation and development of Hai Phong associated with the evidence of prehistoric man at Cai Beo archaeology (Cat Ba) belong to the Ha Long culture about 4000 to 6000 years ago; and with the formation of the Red River civilization of the Dong Son culture with the evidence of human at Trang Kenh archaeology (Thuy Nguyen), Nui Voi archaeology (An Lao) about 2000 to more than 3000 years ago; with legend about the Heroine Le Chan – who founded Trang An at early AD – the cradle of Hai Phong city today.

### **1.11 Nha Trang City (Vietnam)**

Nha Trang is a small city of Khanh Hoa province. This is a coastal province in Southern Central Vietnam. The province is bordered by Phu Yen Province to the North; Ninh Thuan Province to the South; Dak Lak Province to the West; and the South China Sea (locally known as East Sea) to the East. Nha Trang City is 1,280 km from Hanoi, 535 km from Danang, and 448km from Ho Chi Minh City. Nha Trang is home to many famous scenic spots and landscapes and is a major tourist center in the country.

Nha Trang City is situated in a valley surrounded by mountains on three sides: North, West, and South. The sea to the East borders the city. Cai river and Cua Be river divide Nha Trang into 3 sections: the North of Cai River, the South of Cua Be River and the inner part of Nha Trang City located between the two rivers. Nha Trang has 19 islands with more than 2,500 households. The largest of these is Tre Island with an area of some 30 km<sup>2</sup>, sheltering Nha Trang bay from strong winds and waves.

From the year 1653 to middle of 19<sup>th</sup> century, Nha Trang was still undiscovered land belonging to Ha Bac, Vinh Xuong district, Dien Khanh palace. Only through the two first decades of the 20<sup>th</sup> century, Nha Trang had a rapid change. With the decree of the Governor - general of Indochina dated on 30<sup>th</sup> August 1924, Nha Trang became a town. Nha Trang town formed from the ancient villages: Xuan Huong, Phuong Cau, Van Thanh, Phuong Sai, and Phuoc Hai. Today Nha Trang became the cultural, economic, administrative center of Khanh Hoa province.

### **1.12 Lisbon Metropolitan Area (Portugal)**

The Lisbon Metropolitan Area (LMA) with 299,565.89 ha is the westernmost European capital, encompassing 18 municipalities (Alcochete, Almada, Amadora, Barreiro, Cascais, Lisboa, Loures, Mafra, Moita, Montijo, Odivelas, Oeiras, Palmela, Sesimbra, Setúbal, Seixal, Sintra e Vila Franca de Xira). LMA is divided by the large Tagus river estuary, leading thus to two spatial units such as the Great Lisbon and the Setubal Peninsula, sometimes also named as Southern bank.

The LMA coastal municipalities, which will be subject of analysis in this report, are Lisboa, Oeiras, Cascais, Loures and Vila Franca de Xira (all included in the Great Lisbon spatial unit) and Almada, Barreiro, Seixal, Moita, Montijo and Alcochete (all included in the Setubal's Peninsula). The largest municipality is Montijo with 34,859.26 ha, followed by Vila Franca de Xira with 31,767.24 ha and Loures with 16, 933.72 ha.

### **1.13 Algarve Region (Portugal)**

The Algarve, with 499,474.06 ha, is the southernmost region of Portugal and borders with the Alentejo region (North), the Atlantic Ocean (South and West) and the Guadiana river (East) which borders with Spain. The highest point is situated in the hills of Monchique, with a maximum altitude of 902 m (Peak of the Foia). Internally, the region is subdivided into two zones, one to West (Barlavento) and another to the East (Sotavento).

The Algarve's coastal municipalities, which will be subject of analysis in this report, are Albufeira, Loulé, Faro, Olhão, Tavira, Vila Real de Santo António and Castro Marim. These municipalities were chosen because of their touristic importance and relationship with the protected area of Ria Formosa. The largest municipality is Loulé with 76,416.33 ha, followed by Faro with 20,159.32 ha and Castro Marim with 30,084.67 ha.

### **1.14 Funchal Urban Area (Portugal)**

Madeira Island has an area of 75,852.37 ha, and is divided into 10 municipalities: three facing the North (Porto Moniz, Santana and São Vicente) and seven in the South (Calheta Câmara de Lobos, Funchal, Machico, Ponta do Sol, Ribeira Brava and São Vicente). The Funchal's Metropolitan Area, which will be subject of analysis in this report, encompasses the municipalities of Ribeira Brava, Câmara de Lobos, Funchal, Santa Cruz and Machico.

### **1.15 Thames Gateway (United Kingdom)**

The spatial extent of the Thames Gateway was set out in National Regional Planning Policy Guidance (Department of Transport and the Regions, 2001) as part of the regional spatial strategy for the development of the south east of England. This designated Development Area reflects past governments' policy priorities - namely identifying areas of brown-field land (previously developed land), which could be made available for new housing and infrastructure development. It covers over 100,000 ha and stretches over 64 km along the Thames Estuary from Isle of Dogs and London Docklands, near the centre of London, to Southend in Essex (north) and Sheerness in Kent (south). Thames Gateway includes territory governed by 18 local authorities, 168 wards and 23 UK parliamentary constituencies.

The Thames Gateway occupies a substantial proportion of the Greater Thames Estuary, designated as a Coastal Natural Area. However, it should be noted that the Coastal Natural Area does not extend landward to any significant distance except in low-lying areas – thus the Thames Gateway also encompasses areas that lie beyond it.

### **1.16 Portsmouth City (United Kingdom)**

Portsmouth is located in the county of Hampshire on the southern coast of England, approximately 112 km south west of London. Most of the city lies on Portsea Island, bordering the Portsmouth Harbour in the west and the Langstone Harbour in the east. The City of Portsmouth has an administrative area of 6,019 ha (60.19 km<sup>2</sup>), of which 4,028 ha (40.28 km<sup>2</sup>) is land and 1,991 ha (19.91 km<sup>2</sup>) comprise the Portsmouth (1,431 ha) and Langstone (537 ha) harbours.

Historically, Portsmouth's development has been heavily based on its coastal location. It has been an important naval port for centuries (construction of the first docks started in 1212), and today economic activities in the area include shipbuilding, the commercial port and waterfront regeneration related to retailing, leisure and tourism.

## 2. Physical Characteristics and Resources Across Cases

The case studies included in this project are very different in shape and size. They include large metropolitan area like Rome or Mumbai, as well as cities like Gothenburg, Lisbon and Thames Gateways. There also are smaller cities and islands such as Algarve or Funchal. Table 1.1 gives an overview of the main features of the case studies.

*Table 1.1. Main features of the case studies.*

| <b>Case-studies</b>                   | <b>Total area (km<sup>2</sup>)</b> | <b>Area of the core (km<sup>2</sup>)</b> | <b>Area of the ring (km<sup>2</sup>)</b> | <b>Length of the coastline (km)</b> |
|---------------------------------------|------------------------------------|--|--|-------------------------------------|
| Rome Metropolitan Area (Italy)        | 5,792.00                           | 1,498.00                                 | 4,294.00                                 | 150.0                               |
| Chieti-Pescara Urban Area (Italy)     | 957.00                             | 111.00                                   | 846.00                                   | 35.0                                |
| Oostende (Belgium)                    | 204.09                             | 86.19                                    | 117.91                                   | 20.0                                |
| Brugge (Belgium)                      | 616.06                             | 410.20                                   | 205.87                                   | 18.5                                |
| Tel-Aviv Metropolitan Area (Israel)   | 1,466                              | 172.00                                   | 1,294.00                                 | -                                   |
| Haifa Metropolitan Area (Israel)      | 5,339                              | 866.00                                   | 4,473.00                                 | -                                   |
| Gothenburg Metropolitan Area (Sweden) | 1,847.45                           | 33.70                                    | 1,632.2                                  | -                                   |
| Malmö Metropolitan Area (Sweden)      | 2,535.76                           | 13.56                                    | 687.00                                   | -                                   |
| Mumbai Metropolitan Area (India)      | 4,355.00                           | 466.00                                   | 3,889.00                                 | 380.0                               |
| Chennai Metropolitan Area (India)     | 1,189.00                           | 174.00                                   | 1,015.00                                 | 50.0                                |
| Hai Phong City (Vietnam)              | 1,519.00                           | 261.00                                   | 1,258.00                                 | 125.0                               |
| Nha Trang City (Vietnam)              | 252.60                             | 130.09                                   | 122.51                                   | 7.0                                 |
| Lisbon Metropolitan Area (Portugal)   | 1,449.49                           | -  | -  | 312.2                               |
| Algarve Region (Portugal)             | 2,206.30                           | -  | -  | 257.4                               |
| Funchal Urban Area (Portugal)         | 343.53                             | -  | -  | 330.0                               |
| Thames Gateway (United Kingdom)       | 1,000.00                           | -  | -  | 64.0                                |
| Portsmouth City (United Kingdom)      | 60.19                              | -  | -  | -                                   |

All study-areas are very different in term of geographical size and population. For most of the case studies, a core area and at least one ring were defined. The core can be seen as the administrative part of the metropolitan area where most of the jobs are concentrated. The ring plays the role of supplying the core with necessary workforce, often at the rate of 15% or more. However, the functions of the core and ring areas also differ between cases (as said in the methodological section). Definition of core-ring delimitation also depends on data availability and realistic functions of the historical zoning process in each case-study area. As seen from

Table 1.1, the ring is often larger than the core in size, except for the cases of Oostende and Brugge (both in Belgium), where the ring is much smaller than the core.

In terms of natural resources, the most notable in all case-studies are the coastal landscapes and ecosystems that are being exploited mainly for tourism purposes. The case studies possess diversified morphological features ranging from beaches wetlands and inland forests. In all European case studies, there's Natural 2000 sites presence. They are vital sites for conservation of important habitats and bird species. However, more often, they locate also very close to urban development areas.

Table 1.2. *Presence of the main morphological features of the case-studies.*

| Main typological features<br>Case-studies | Coral<br>reef | Sea-<br>grass | Sandy<br>beaches | Dunes/<br>Hills | Tidal flats/<br>Marshes | (Rocky)<br>Cliffs | Low (flat)<br>lands | Swamp | Forest |
|---|---------------|---------------|------------------|-----------------|-------------------------|-------------------|---------------------|-------|--------|
| Rome Metropolitan Area (IT)               |               |               |                  | x               |                         |                   | x                   | x     | x      |
| Chieti-Pescara Urban Area (IT)            |               |               | x                |                 | x                       |                   |                     |       | x      |
| Oostende (BE)                             |               |               | x                | x               |                         |                   | x                   |       | x      |
| Brugge (BE)                               |               |               | x                | x               | x                       |                   | x                   |       | x      |
| Tel-Aviv Metropolitan Area (IL)           |               |               | x                | x               |                         |                   | x                   |       |        |
| Haifa Metropolitan Area (IL)              |               |               | x                | x               |                         |                   | x                   |       |        |
| Gothenburg Metropolitan Area (SE)         |               |               |                  |                 |                         | x                 |                     |       | x      |
| Malmo Metropolitan Area (SE)              |               |               | x                |                 |                         |                   | x                   |       | x      |
| Mumbai Metropolitan Area (IN)             |               |               |                  |                 | x                       | x                 |                     | x     | x      |
| Chennai Metropolitan Area (IN)            |               | x             | x                | x               |                         |                   |                     | x     |        |
| Hai Phong City (VN)                       |               | x             | x                |                 | x                       |                   | x                   | x     | x      |
| Nha Trang City (VN)                       | x             |               | x                |                 | x                       | x                 | x                   | x     | x      |
| Lisbon Metropolitan Area (PT)             |               |               |                  |                 | x                       |                   | x                   |       | x      |
| Algarve Region (PT)                       |               |               | x                |                 | x                       |                   |                     |       |        |
| Funchal Urban Area (PT)                   |               |               |                  |                 |                         | x                 |                     |       | x      |
| Thames Gateway (UK)                       |               |               |                  |                 | x                       |                   | x                   |       |        |
| Portsmouth City (UK)                      |               |               |                  | x               | x                       |                   |                     |       |        |

The 17 study areas boast a variety of ecosystems as expected due to their various characteristics. In all areas, a number of protected areas can be found, either designated by national legislation or under regional protection. In most of the European case studies, protected areas scattered and mingled amongst urban centres. However, European Bird Directive and Habitats Directive also create a large network of protected sites. In Asian cases, a

number of National Parks and Protected Areas are present. They are important features for various reasons, mainly ecosystem functions and touristic attractions. Also, it is notable that most urban centres in Europe have high percentage of green spaces. The combination of urban green space and forest areas in European case-studies is as high as 60%.

Land resource is the next important feature. Land-use is a very important aspect that is defined by the socio-economic development process. The case-studies in SECOA can be categorised into two groups: the developed group where development process has stabilised and landuse change occur slowly. The other group is the fast growing group (or developing group) where land-use change occurs much faster.

In the European case-studies, land-use has largely been defined by the development process and many changes are controlled by planning. Agriculture/arable land is the main land-use type in most of the western European countries, with as high as 78% of land area in Chieti-Pescara. Industrial land-use is relatively small in area in most of them.

Table 1.3. Land-uses proportion in the case-studies.

|                     | Year | Total Area (km <sup>2</sup> ) | Agriculture (%) | Industrial (%) | Mixed Industrial/ Commercial (%) | Natural Habitat (%) | Open Space (%) | Built up area in urban environment with mixed used (%) |
|---------------------|------|-------------------------------|-----------------|----------------|----------------------------------|---------------------|----------------|--|
| Rome (IT)           | 2006 | 5,793                         | 60.0            | 0.50           | 1.50                             | 20                  |                | 9  |
| Chieti-Pescara (IT) | 2006 | 974                           | 78.50           | 0.20           | 1.80                             | 12                  | 0.45           | 6  |
| Oostende (BE)       | 2009 | 249.4                         | 69.15           | 3.07           | -                                | 2.90                | 12.31          | 12.56  |
| Brugge (BE)         | 2009 | 616                           | 64.87           | 2.65           | -                                | 6.07                | 12.72          | 13.05  |
| Tel Aviv            | 2009 | 1,512                         | 27.46           |                | 3.52                             | 9.91                | 68.29          | 24.71  |
| Haifa               | 2009 | 1,045                         | 35.57           |                | 2.85                             | 27.86               | 78.95          | 16.24  |
| Gothenburg          | 2005 |                               | 23.67           | -              | 2.59                             | 49.3                | -              | 11.57  |
| Malmö               | 2005 |                               | 71.21           | -              | 1.90                             | 5.68                | -              | 11.67  |
| MMR                 | 2008 | 4,355                         | 28.0            | 2.47           |                                  | 34.17               | 23.10          | 10.05  |
| CMR                 | 2008 | 1,189                         | 8.75            |                |                                  | 1.29                | 36.83          | 37.00  |
| Hai Phong           | 2009 | 1,519                         | 542.39          | 360.69         |                                  | 235.21              |                |  |
| Nha Trang           | 2008 | 252.60                        | 42.06           | 34.69          |                                  |                     |                |  |
| Lisbon              | 2006 | 1,449.5                       | 39.5            | 3.3            | -                                | 23.8                | -              | 19.1   |
| Algavre             | 2006 | 2,206.3                       | 49.2            | 0.3            | -                                | 39.6                | -              | 2.6  |
| Funchal             | 2006 | 343.5                         | 12.6            | 0.9            | -                                | 66.1                | -              | -  |
| Thames              | 2001 |                               |                 |                | 2.30                             | 60                  | 6              | 14   |
| Portsmouth          | 2001 |                               |                 |                | 4.20                             | 22.77               | 11             | 19.40  |

Mineral resources are not currently significant at the SECOA case-studies. In some European cases, such as Tel Aviv and Haifa (Israel), Zeebrugge (Belgium), Rome and Chieti-Pescara (Italy), and Lisbon (Portugal), sand exploitation for construction is the main mineral extraction activity. In India and Vietnam, mineral extraction focuses mainly on salt and sand production, with some other minor mining activities. However, it is important to note that mining and mineral extraction have played more important roles in different periods of the urban and industrial development, but not nowadays.

## **2.1 Socio-cultural resources**

All case-studies boast valuable cultural features. In some places (such as Rome, Mumbai, Brugge and Lisbon), there are features of international importance. In other places are values of regional and national importance. The most notable are Rome and Brugge, where several UNESCO World Heritage Sites are located. Rome is one of the richest basins of cultural heritage in the world.

The historic centre of Rome, the properties of the Holy See in Rome, San Paolo fuori le Mura (which is also Vatican extraterritorial property) are listed among the UNESCO world heritage sites, as well as the Etruscan necropolises of Cerveteri and Tarquinia. Ostia antica (the ancient Ostia city) is listed by UNESCO among the most important hundred archaeological sites in the world. The medieval centre of Brugge is another UNESCO site of great importance.

In all sites, regionally and nationally important sites can be identified easily. Monuments with archeological or religious values concentrate at high density in most of the cases.

One of the most dominant social phenomena in the SECOA cases studies is the dynamic migration scheme. Migration has always been a visible phenomenon in the metropolitan areas, mainly due to the large employment market. Migrants tend to search low price housing in the suburbs and simultaneously to settle near work places. There is a positive influx rate seen throughout all European case studies. However, positive migratory rate has been slowing down in recent years, with peaks during the 2002-2005 period.

In some cases, such as Rome, Lisbon, and Brugge, migratory rate is higher in the ring than in the core area. Also, the core areas experience some time a negative migratory rate, indicating people are moving out of the core areas. However, the rate of migrants is often high in the core (such as in Thames Gateway and other cases), indicating that while local people are seeking new living space outside the crowded core, migrants are moving in. All coastal areas witness positive migratory rate.

In the four Asian case-studies, rural-urban migration is dominant. In Mumbai, proportion of migrants accounts for a round half of the total population, with more migrants in the ring than in the core area.

## 2.2 Economy and Employment

Economy is an important feature that is shaped by the utilisation of coastal resources as well as defining the impacts put on them. In coastal areas around the world, economic development pattern run on a rather common path and traditionally relies mainly on fisheries and aquaculture, tourism and port development. In recent development trends, economic growth has shifted to more focus on the tertiary and quarterly sectors, with the fast growing of the services and information sectors.

This common trend is reflected in all of the cases in the SECOA project, with the case studies in developing countries in Asia (India and Vietnam) where traditional development phase with fisheries/aquaculture, tourism and port sectors play the major roles in the development of the regions. Meanwhile, in developed countries in Europe, the economy has shifted to services and information sectors, but tourism and port development still play the major role. However, each case study has different development trends that link them to their location and relative position in the region. The impacts of economic downturns in the last decade also affect each case study differently.

It is also notable that there is a suburbanisation trends in most of the European case studies, where economic activities (industries, commerces and services) grow faster in the ring area and stablised or reduced in the core area. Agricultural activities mostly occur in the ring area, with very fast reduction in the core area, both in term of number of holdings and number of employments. Service sector is the only sector that has grown both in the ring and the core areas in most cases, sometimes at a very high rate. Service sector also provide the most employments across the cases.

In Asian cases of India and Vietnam, agriculture/aquaculture remains a major sector in term of employment as the sector is still relying heavily on manual labours. However, in term of economic contribution, industrial and service sectors are more important. It is notable that in the Asian cases, household industry accounts for a large part of the economy, although this industry is not mostly registered. In the case of Mumbai, this sector employs around 2-3% of the population, mostly women.

Employment and unemployment are important factors in a society. Unemployment, as defined by the International Labour Organization, occurs when people are without jobs and they have actively looked for work within the past four weeks.

Table 1.4. *Unemployment rates.*

| Case-studies                          | Year | Unemployment rate (%) |
|---------------------------------------|------|-----------------------|
| Rome Metropolitan Area (Italy)        | 2008 | 8.1                   |
| Chieti-Pescara Urban Area (Italy)     | 2009 | 8.2                   |
| Oostende (Belgium)                    | 2008 | 7.4                   |
| Brugge (Belgium)                      | 2008 | 4.6                   |
| Tel-Aviv Metropolitan Area (Israel)   | 2009 | 7.6*                  |
| Haifa Metropolitan Area (Israel)      | 2009 | 7.6*                  |
| Gothenburg Metropolitan Area (Sweden) | 2005 | 3.2**                 |
| Malmo Metropolitan Area (Sweden)      | 2005 | 4.1**                 |
| Mumbai Metropolitan Area (India)      | 2001 | 17.0***               |
| Chennai Metropolitan Area (India)     | 2001 | 21.8***               |
| Hai Phong City (Vietnam)              | 2009 | 17.0                  |
| Nha Trang City (Vietnam)              | 2009 | 6.3                   |
| Lisbon Metropolitan Area (Portugal)   | 2009 | 9.6*                  |
| Algarve Region (Portugal)             | 2009 | 9.6*                  |
| Funchal Urban Area (Portugal)         | 2009 | 9.6*                  |
| Thames Gateway (United Kingdom)       | 2010 | 4.55                  |
| Portsmouth City (United Kingdom)      | 2010 | 3.7                   |

In the SECOA case-studies, unemployment rate varies widely. Due to heterogenous data from the case studies, it is not always possible to discuss the unemployment trends. In most case studies, the unemployment rate is higher in the core than in the ring of a study area despite the fact that the core generates much jobs than the ring area.

### 3. Identification of Users Across Cases

#### 3.1 Inhabitants/Households

The most important user group is undoubtedly the inhabitants of the area. Residents and private households are among the dominant resource user groups, in the roles of

---

\* National unemployment rates reported by EUROSTAT

\*\* Percentage over the total population

\*\*\* Adjusted rate: equal to the percentage of “statistically unemployed” minus the percentage of “marginal workers”.

“consumptive users”. The social differences among the inhabitants in terms of social structure, economic situation and welfare that may influence conflicts between resource users are not sufficiently visible from the statistics for the different parts of the metropolitan area.

The 17 case studies in SECOA are very different in term of their inhabitants. Most areas are crowded with very high population density. As many of them are popular tourist destinations, seasonal surge in density due to tourists is observed. Some have high proportion of migrants while other accommodates mainly locals.

The most heavily populated area is Mumbai Metropolitan Area, with a total population of more than 19 million people. This is also the area with the highest level of migrants, whose account nearly half of the total population. Mumbai Metropolitan Area also has one of the densest areas in term of population density. Both Indian case studies stand out as the densest and most populous, with high level of migrants.

Table 1.5. *Demographic indicators (2001).*

| Case-studies                      | Total population<br>(.000) | In which (%) |       | Proportion of migrants<br>(%) |
|-----------------------------------|----------------------------|--------------|-------|-------------------------------|
|                                   |                            | Men          | Women |                               |
| Rome Metropolitan Area (IT)       | 4,259                      |              |       |                               |
| Chieti-Pescara Urban Area (IT)    | 424.00                     |              |       |                               |
| Oostende (BE)                     | 123.47                     | 48.71        | 51.29 | 3.54                          |
| Brugge (BE)                       | 255.84                     | 48.89        | 51.11 | 2.52                          |
| Tel-Aviv Metropolitan Area (IL)   | 3,344                      | 49.04        | 50.96 |                               |
| Haifa Metropolitan Area (IL)      | 1,077.00                   | 47.73        | 52.27 |                               |
| Gothenburg Metropolitan Area (SE) | 797.18                     | 50.27        | 49.73 | 14.18                         |
| Malmo Metropolitan Area (SE)      | 403.46                     | 49.00        | 51    | 27                            |
| Mumbai Metropolitan Area (IN)     | 19,363.00                  | 54.64        | 45.36 | 48.7                          |
| Chennai Metropolitan Area (IN)    | 7,184                      | 51.10        | 48.90 | 28.6                          |
| Hai Phong City (VN)               | 1,841.6                    | 49.58        | 50.42 |                               |
| Nha Trang City (VN)               | 393.53                     | 49.50        | 50.50 |                               |
| Lisbon Metropolitan Area (PT)     | 2,662.00                   |              |       | 4.82                          |
| Algarve Region (PT)               |                            |              |       | 6.07                          |
| Funchal Urban Area (PT)           | 205.50                     |              |       |                               |
| Thames Gateway (UK)               | 1,450.00                   | 48.62        | 51.38 |                               |
| Portsmouth City (UL)              | 187.00                     | 49.20        | 50.80 |                               |

Other case studies in Europe also have high population density in comparison to their national average. They also have high level of migrants (especially international migrants). In Europe, Rome Metropolitan Area is the most populous with a population of nearly 4.3 million. Only 3 out of 13 European case studies have the population of over 1 million people. Portsmouth (UK) is the most densely inhabited area amongst the European case studies with an average of more than 2700 people per km<sup>2</sup>.

Table 1.6. Population density in the study areas (ppl/km<sup>2</sup>).

| Case-studies                      | Average density | Density in the core | Density in the ring | Average household size |
|-----------------------------------|-----------------|---------------------|---------------------|------------------------|
| Rome Metropolitan Area (IT)       | 735             | 1,671               | 280                 |                        |
| Chieti-Pescara Urban Area (IT)    | 435             | 1,580               | 245                 |                        |
| Oostende (BE)                     | 605             | 1,087               | 252                 | 2.07                   |
| Brugge (BE)                       | 415             | 406                 | 435                 | 2.26                   |
| Tel-Aviv Metropolitan Area (IL)   | 2,187           | 7,073               | 1,337               | 2.9                    |
| Haifa Metropolitan Area (IL)      | 399             | 1,026               | 277                 | 3.0                    |
| Gothenburg Metropolitan Area (SE) | 414             | 4,433               | 345                 | 2.26                   |
| Malmo Metropolitan Area (SE)      | 147             | 8,538               | 397                 | 2.10                   |
| Mumbai Metropolitan Area (IN)     | 4,445           | 25,705              | 1,899               | 4.68                   |
| Chennai Metropolitan Area (IN)    | 6,042           | 24,963              | 2,798               | 4.45                   |
| Hai Phong City (VN)               | 1,212           | 2,962               | 850                 | 3.48                   |
| Nha Trang City (VN)               | 1,558           | 2,008               | 1,080               | 3.97                   |
| Lisbon Metropolitan Area (PT)     | 959             | 1,906               |                     |                        |
| Algarve Region (PT)               | 86              | -                   | -                   |                        |
| Funchal Urban Area (PT)           | 308             | -                   | -                   |                        |
| Thames Gateway (UK)               | 1,450           | -                   | -                   | 2.42                   |
| Portsmouth City (UK)              | 2,717           | -                   | -                   | 2.28                   |

In most case studies, the core area has much higher population, as high as 10 times more than the ring area. High population concentration is also observed in the coastal area. In some case-studies, such as Thames Gateway, Brugge and Lisbon, population density is uneven in the central core, with some sections of the city with very high population density (over 9000 people/km<sup>2</sup>). The Indian case-studies have exceptionally high population density.

During the last decade, between 2001 and 2009, all case studies areas saw an increase in population. For most cases, the increase was due to high level of migration (physical growth) rather than due to the natural growth of the population. Average annual population growth rate in European case-studies is below 1%. For Asian case-studies, the average annual growth rate is from 1.1%-3.3%.

European case-studies exhibit a general trend of aging population. Most of the aged population is located in the ring, with most cases have around one fourth of the population of the ring is over 65 (23% in Brugge, 30% in Oostend, 24% in Lisbon). Tel Aviv has the least aging population amongst the European case-studies.

Across the case studies, the household size reduced in the last decade. Household size is much larger in Asian cases, nearly double the figure for European cases. Household size in the ring and the core also differs. In most cases, the ring has smaller household size than the core, except for Swedish cases, where the core has much smaller average household size.

### 3.2 Tourism

All coastal urban areas in this study boast an important tourism industry, relying on their coastal resources, especially the beaches. For all areas, a combination of different but rich touristic resources draws tourists all year round, but summer is the touristic season in all. The main touristic features include:

*Table 1.7. Touristic features of the case studies.*

| Case-studies                      | Beaches | Natural reserves/<br>parks | Special landscapes | Socio-cultural activities | Historical Cultural and Religious heritage | Other (business, shopping, etc.) |
|-----------------------------------|---------|----------------------------|--------------------|---------------------------|--|----------------------------------|
| Rome Metropolitan Area (IT)       | x       |                            |                    | x                         | x  |                                  |
| Chieti-Pescara Urban Area (IT)    | x       |                            |                    |                           |  | x                                |
| Oostende (BE)                     | x       | x                          | x                  |                           |  | x                                |
| (Zee)Brugge (BE)                  | x       | x                          |                    | x                         | x  | x                                |
| Tel-Aviv Metropolitan Area (IL)   | x       |                            |                    | x                         |  | x                                |
| Haifa Metropolitan Area (IL)      | x       |                            |                    |                           |  | x                                |
| Gothenburg Metropolitan Area (SE) | x       | x                          |                    | x                         | x  | x                                |
| Malmo Metropolitan Area (SE)      | x       | x                          |                    | x                         | x  | x                                |

|                                |   |   |   |   |   |   |
|--------------------------------|---|---|---|---|---|---|
| Mumbai Metropolitan Area (IN)  | x | x |   | x | x | x |
| Chennai Metropolitan Area (IN) | x |   |   | x | x | x |
| Hai Phong City (VN)            | x | x | x |   | x |   |
| Nha Trang City (VN)            | x | x |   |   | x |   |
| Lisbon Metropolitan Area (PT)  | x | x | x | x | x | x |
| Algarve Region (PT)            | x |   |   |   |   |   |
| Funchal Urban Area (PT)        | x | x |   |   |   |   |
| Thames Gateway (UK)            | x |   |   | x | x | x |
| Portsmouth City (UL)           | x |   |   | x | x | x |

Table 1.7 shows that all coastal urban areas in this study possess a strong beach tourism sector, supplemented by other attractions such as natural parks, special landscape, socio-cultural activities, historical-cultural heritage, etc. For the area with warm climate, beach tourism dominates the industry as it can be running all year round. For more northern areas, where beach tourism is limited mostly to summer period, supplemented activities are introduced to attract tourists the rest of the year. For whatever the touristic formula is, the main objective of all studied coastal areas is to keep an up-and-running tourism industry.

In all case-studies, number of tourists and number of overnight-stays have increased during the last 10 years. Also, number of tourism facilities (accommodation and horeca) also increases.

### 3.3 Industrial, Trade and Commerce

Contribution of the industrial, trade and commerce sectors in SECOA case-studies vary greatly. However, it is notable that industrial activities have been reducing in the European cases during the last decades. The economies have shifted from manufacturing economies into trade and commerce economies, with high concentration in IT and service sectors.

A reverse trend is seen in the Asian cases, where industrial sector (especially manufacturing) is gaining importance, especially towards exportation. Trade and commerce is also strong in all Asian cases.

### 3.4 Agriculture

Across the 17 case-studies, farming is shown as a not important feature in coastal areas of the European countries but still having substantial position in the economy of the less developed countries like India and Vietnam.

Arable land (including actual farming area, pasture, orchards and non-use arable area) has different position in different case studies in term of its contribution to the economy, especially through employment. In some cases like the Belgian, UK, Italian cases, and in Algarve region (Portugal), the arable land area accounts for 42% to 78% of the total land areas. However, the actual farm land (including pastures and orchards) is small (around half of the arable area). The employment in the agricultural sector is also marginal in most of the European cases.

Agriculture is still one of the largest land-use categories. However, actual number of farms and the number of employments in agricultural sector are low. The production is also marginal in most of the European cases.

*Table 1.8. Arable land area (ha) and agricultural employments.*

| <b>Case study</b>                     | <b>Total Agricultural/Arable Area (ha)</b> | <b>% of total land area</b> | <b>Employ-ments (% of the working population)</b> |
|---------------------------------------|--|-----------------------------|---|
| Rome Metropolitan Area (IT)           | 553,956.8                                  | 68.2%                       |   |
| Chieti-Pescara Urban Area (IT)        | 92,552.2                                   | 78.1%                       |   |
| Oostende (BE)                         | 17,246.8                                   | 69.2%                       |   |
| (Zee)Brugge (BE)                      | 39,965.0                                   | 64.9%                       |   |
| Tel-Aviv Metropolitan Area (IL)       |  |                             |   |
| Haifa Metropolitan Area (IL)          |  |                             |   |
| Gothenburg Metropolitan Area (SE)     | 41,534                                     | 22.48%                      |   |
| Malmo Metropolitan Area (SE)          | 49,889                                     | 71.21%                      |   |
| Mumbai Metropolitan Area (IN) (2006)  | 11,095,181                                 | 28.5%                       | 2.45%   |
| Chennai Metropolitan Area (IN) (2006) | 1,207,850                                  | 12%                         | 3.07%   |
| Hai Phong City (VN)                   |  |                             |   |
| Nha Trang City (VN)                   |  |                             |   |
| Lisbon Metropolitan Area (PT) (2006)  | 57,257.0                                   | 19.1%                       |   |
| Algarve Region (PT) (2006)            | 108,615                                    | 49.2%                       |   |
| Funchal Urban Area (PT) (2007)        | 4,353                                      | 12.7%                       |   |
| Thames Gateway (UK)                   |  | 42.4%                       | 0.2-2.3%*   |
| Portsmouth City (UL)                  |  |                             | 0.39%   |

In all case-studies, most of the agricultural activities happen at the ring. European cases witness in general a reduction in agricultural activities, both in terms of number of businesses as well as of agricultural employments, although at very different rates. There is also a shift in agricultural activities, with less production on cultivation and a shift towards husbandry.

In Asian case-studies, agriculture remains an important sector, with increase in both cultivation and husbandry. Intensive production is also on the rise in all 4 Asian coastal urban areas.

### **3.5 Fishery**

Across all case studies in the project, fishing remains important only in few places. In Europe, Chieti-Pescara (IT), Portsmouth (UK) and Gothenburg (SE) are the major quarters accommodating fishing fleets and fishery processing facilities. At all Asian cases, on the contrary, fishing is still an important economic and subsistent activity. The coastal areas of the Asian cases are still filled with small fishing villages, though mingling into resorts and tourism development projects.

Fishing is an important economic activity and plays a central role in the socio-economic development of the two metropolitan cities in India (Mumbai and Chennai) as well as in the two cases in Vietnam. This activity has been important traditionally also. The demand for fresh marine fish has been growing steadily. In the Asian cases, fish markets are the most lucrative for different types of marine fishes. The four Asian cases also address for important ports that are also the main ports to export seafood. Increasing demand has also accelerated the growth of aquaculture.

### **3.6 Ports**

Ports are important features at all coastal areas in this study. They are all different in size and functions but all play important roles in the development of the urban area where they are located in. In some cases, they even shape its development. There are still few small fishing ports remaining but commercial ports prevail in all areas. All ports in the study sites saw increasing throughput during the last decade. The ports in the study areas also aim to develop their added-value activities through becoming a multi-modal node, where shipping, rail, road and inland waterways meet. Secondly, they aim to provide services within the ports (stripping and packaging, combine shipments, etc.) to attract more customers. Therefore, the ports become a complex that edge between manufacturers and customers.

Ports become more and more an employment node in most of the coastal urban areas in this study. For example, the port of Zeebrugge creates around 11,000 direct jobs or around 15% of total employments in the Brugge Metropolitan Area. It also creates around 9,000 indirect jobs. To the south, the Port of Lisbon generates around 40,000 employments and contributes around 5% of the Regional GDP.

Most of the major commercial ports in the project case study areas want an expansion in size to accommodate more activities and services.

### **3.7 Environmental/Community groups**

Environmental groups and non-government organizations (NGOs) play an important role in environmental education, taking up civic and environmental issues, and in promoting greater accountability and transparency in government actions. There are a variety of organizations in the case studies areas who area involved mostly in following activities:

1. Promoting environmental and natural resources protection through projects and advocacy;
2. Capacity building for local people in environmental and natural resources protection through training;
3. Organisation of advocacy actions against (local) governmental policy/projects;
4. Protection of local people's rights.

While many of the organizations are internationally and nationally organized groups, more and more community groups (locally organized groups) are formed, especially in Europe. Depending on the approach adopted, each group has its own focus groups amongs the local where it asserts its activities. Most of the organizations focus on the poorer/disadvantaged stratumof the population, as it seems that their voice is often neglected. This includes women, youth or low-income groups.

In many cases, environmental/community groups were formed to counteract political movements, such as the cases in Italy or UK. Nonetheless, their role is particularly important when development projects mainly aiming at economic growth put in danger natural and cultural heritage. Their main focuses are to protect environment and resources, as well as the right of local people to have a voice in what happens locally. In developing countries (India and Vietnam), environmental/community groups mainly focus on improving local people

livelihoods while contributing to environmental protection and sustainable resource use. Political movements in these countries are none to little existence. Some policy advocacy actions are organized, but often at limited extend.

### **3.8 Second-homes**

The trends development for owning a second residence in the coastal zone for recreation has become more and more prevailing in many coastal areas worldwide. Second-homes are properties owned or rented on a long lease since it is the occasional residence of a household that usually lives elsewhere (Shucksmith, 1983). This definition gives room for various interpretations and comprises different types of property in different countries. By definition, second-home owners are not resident of the commune where they own their recreational property. They often live elsewhere and only stay at their second-homes occasionally, and often seasonally. For the coastal communes, second-homes are most used during summer season and less during other months. However, there are also other forms of temporary residence, as for example along the Swedish coasts where a long trend is that people transform their second homes into permanent residence – legally or informally.

Also, by definition, second-homes are recreational properties. Therefore, it shares many of the characteristics of other recreational properties in terms of tourism impacts on the environment and society. Therefore, second home owners are one of the users that have a direct implication in resources consumption. Their action corresponds mostly to punctual uses. In most of the cases, second home owners are well-off people, who can afford a second property elsewhere for occasional uses.

Studies on the impacts of second-homes (and owners) have been undertaken in many areas worldwide but mostly in developed countries. The main conclusions are that second-homes contribute to economic development (through the use of the residences and other services), (re)generate social development and socio-cultural interactions.

On the negative side, second-homes tend to possess the “defects” of tourism accommodation, which consume more resources (fresh water, electricity, land, etc.) and produce more waste than a normal accommodation. Its positive contribution is often seasonal which creates imbalance in services provision. Also, it attracts only certain types of services, such as recreational personal care (spa, beauty salon, etc.), catering, transport, etc. but does not contribute to the development of education, for example. Also, studies point out that most of the second-home owners are retirees or near the end of their active working life, and therefore contribute to the aging of the host society. This continues in a vicious cycle as the more aged a

society, the more driven away the local youth as social and cultural services tend to be designed to fit to the aging permanent tourists, who are often well-off and ready to pay extra during their holidays. Studies also show that second-home owners can contribute effectively in shaping the development directions of the host community.

Each case study in the project has different form of second-homes and their particulars contribute to the shaping of the local society. Currently in most of the case studies, the presence of second-homes is undeniable but the extent is not well researched in many cases. Also, there is an unascertained potential of second-homes which could be rented out as self-catering accommodation to visitors but are currently only used by the owners' families, friends and relatives; there are no current figures on the level of utilisation by the owners or their willingness to rent their property. In Belgium, UK and Portugal, some data is available on the second-homes and presented below.

In 2007, the coastal communes of Brugge SA and Oostende SA have in total of 82,700 second homes amongst them. Coastal communes Brugge SA are the most popular destinations for second-home owners, with Knokke-Heist leads the list with approximately 18,200 second homes. Blankenberge has roughly 6,600 units and Zeebrugge has around 830 units. They are all at the coastal front.

Coastal communes of the Oostende SA are also a popular destination, with Middelkerke on top with more than 14,000 units, followed by Oostende with around 6,600 units. Bredene also has around 1,000 units of second homes. The number of second homes in Oostende has increased from 5,220 units in 1989 to 6,600 in 1997 (Oostende Gemeentelijk) and kept stabilised.

Second homes have been one of the main causes for urban sprawl in the Tagus Estuary, Portugal. In Lisbon Metropolitan Area there is a more predominant occurrence of weekend residences. Regarding the proportion of seasonal use dwellings. Almada and Cascais are the two municipalities that outstand in the study area. It must be said that the great feeder of this second home owners are Lisbon residents. Second homes have a direct correspondence with beach areas. Thus, the south bank of Tagus Estuary is preferably chosen for weekend short-breaks. Costa de Caparica stands out with 75% of dwellings for seasonal use.

According to the 2001 census approximately 0.2 % of homes in the local authority areas in which the Thames Gateway is located were either second homes or holiday accommodation, against an average of 0.7 % for England and Wales. A subsequent estimate suggested that by 2005 approximately 1.0 % of homes in the UK were second residences, reflecting changing patterns of divorce, employment and living arrangements. According to the 2001 census 0.4 % of homes in Portsmouth (340) were either second homes or holiday accommodation, against an

average of 0.7 % for England and Wales. A subsequent estimate suggested that by 2005 approximately 1.0 % of all homes were second residences.

#### **4. Conclusions**

Due to the uneven levels of standardised and detail data for different case-studies, it has not been the aim of this chapter to provide a comprehensive comparison between all the case studies. Rather, an attempt is made to give a first impression on the resources and users in study areas, using a preliminary, first observations that need to be specified, substantiated and modified in further research, by more in-depth comparison.

From the first impression, it is indicated that all coastal cities in the project face challenges rising from the relationships between urban development, human mobility and environmental changes. However, different development histories and environmental settings of case studies also mean that these differences are articulated differently, as are policy responses.

All the coastal areas considered are highly populated and heavily urbanized. There is an increase of the population that is registered along these areas. The increase is also more pronounced in larger case studies, which implies an increase of the human stress on this environment. Internal and international migration, as well as a large student population, have contributed to this renewed demographic dynamism.

In terms of land use, in all the metropolitan areas a decrease of the agricultural land is recorded; the industrial, built up and commercial areas are expanding mostly in the ring. Given the ecosystems importance at all sites, many areas, mostly intertidal areas (mudflats and salt marshes) are protected by national and international conservation designations, including Ramsar, Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Sites of Special Scientific Interest (SSSI).

Economically, in all case-studies, there is a shift in European case-studies towards to information and services economy. While almost all case studies are relatively prosperous by the standards of their national standard, they also contain areas of very high social, economic and environmental deprivation. The unemployment rate in all cases is close to their national average. In all metropolitan areas the tourist sector is in steady growth. A very high increase is recorded in the number of enterprises and a non-negligible increase is also reported in the number of tourists. Cultural heritage is an important resource in all the metropolitan areas.

In term of users, there are both similarities and differences between the case studies, and these of course partly relate to population sizes and locations as well as to the environmental

and socio-economic systems outlined above. The conflicts between these users are also played out in context of very different development potentials.

The dominant users in all metropolitan case studies are the urban population who live within short distances from the coast and enjoy the coastal environment. The only other dominant coast user is the tourist establishment both distributed in specific areas with the former located usually in less urbanised areas and the latter in urban areas especially in the waterfront zones.

The tourism streams are diverse and include both (relatively older) cultural tourists and visitors, and (younger) night-time economy participants. Economically tourism is recognised as a major income potential for the entire coastal stretch and is evident in coastal urban fronts; the majority of the conflicts along the coastal stretch involve further development of tourist establishments. This is enhanced by the increasing influx of visiting tourists. All coastal areas are affected by intense seasonal uses, often during summer season, due to a higher number of temporary inhabitants. It poses problems of water availability and waste production. The numerous beach houses' activities during summer contribute to lower the quality of life of residents. Thus the very valuable cultural and natural resources are put in danger by the intense use of coastal areas. There are diverse employers, ranging from small service establishments to major manufacturing enterprises, but the economic structures of all case-studies are very different. In some cases, the structure is defined and stable (such as Rome, Lisbon, Brugge, Oostende, Gothenburg, Malmo) while in others it is dynamic and changing.

Port activities remain significant in all cases although there is a shift of the port activities, to become port-industry areas with added-values activities. Harbours and airports activities all year long contribute to the pollution problems.

Farmers are an important group of users in eastern Thames Gateway, but of limited importance elsewhere, as is commercial fishing. Fishing is not frequent in the all the European cases but remains an important sector in Asian cases. The same is applied to the agricultural sector.

As would be expected, a range of international and national conservation bodies are represented in most of the case studies, involving public, private and voluntary sectors. Their focus is mainly on protected coastal areas, and on historic cultural and industrial sites, many of which are directly connected to estuarine, coastal and harbour sites. There is also a very large number of local conservation groups in all cases.

Xuan-Quynh LE, Ahmed Z. KHAN, Koen DE MUNTER, Eric CORIJN, COSMOPOLIS,  
Department of Geography, Vrije Universiteit Brussel, Belgium.

email: [le.xuanquynh@vub.ac.be](mailto:le.xuanquynh@vub.ac.be)

email: [azm.khan@asro.kuleuven.be](mailto:azm.khan@asro.kuleuven.be)

---

Xuan-Quynh LE, Ahmed Z. KHAN, Koen DE MUNTER, Eric CORIJN, "Coastal Urban Environment: A Synoptic View of Resources and Users Across Cases". In: Ahmed Z. Khan, Le Xuan Quynh, Eric Corijn, Frank Canters (ed.), *Sustainability in the Coastal Urban Environment: Thematic profiles of Resources and their Users*. Cap. 1. SECOA FP7 Research Project, Vol. 3. Rome: Sapienza Università Editrice, 2012. *ojs.uniroma1.it*. DOI: [10.7357/DigiLab-10168](https://doi.org/10.7357/DigiLab-10168). Web. 20 February 2013.

**ABSTRACT:** The aim of this chapter is to sketch out the diversity of coastal urban environments across the SECOA case study areas. This is based on building up a synoptic view of cases through taking stock of their specific historical and geographical position, physical characteristics and socio-cultural and economic resources, and the identification of main users. The common attributes and distinctive features are summarised in the conclusion that characterises the trends in coastal urban environment across the SECOA cases.

**KEYWORDS:** Coastal urban areas, coastal resources, coastal users, environmental characteristics, socio-economic features, comparative analysis.

---

Submitted: 01<sup>th</sup> July 2012

Accepted: 23<sup>th</sup> July 2012

Published: 20<sup>th</sup> February 2013

