

CHAPTER 3.

Environmental Conflicts in Coastal Urban Areas: The Belgian Case-Studies of Ostend Airport, Schipdonk Canal and Zeebrugge Harbour

Ahmed Z. KHAN, Xuan-Quynh LE, Torsten WIEDEMANN, Eric CORIJN, Frank CANTERS
Department of Geography, Vrije Universiteit Brussel, Belgium

1. Introduction

Being among one of the most densely populated countries in the world, the value of open and green space in Belgium has become paramount. With the intensifying urbanization trends, there is a societal awareness manifest at different fronts in the society of seeing open space as a fast disappearing and depleting resource that is consumed by different uses based on competing interests. Since the 1980's, this so-called 'green awareness' is growing in Flanders region. A range of measures and responses - legal, regulatory, institutional, policy and civil society related - have progressively emerged concerning the protection and preservation of habitats, landscapes, environmentally unique areas, distinctive historical heritage and the like. However, growth based economic development guided by insufficiently coordinated policies from different sectors continues and conflicts between local residents, environmental NGO's, green parties, economic developers, enterprises and the different government agencies rise when open spaces are claimed for economic purposes and projects. The three conflict cases presented in this chapter characterize such environmental conflicts.

The first conflict case analyzed in this chapter concerns the privatization of the Ostend airport, which is located on the south-western edge of the coastal city of Ostend, Belgium. The coastal infrastructure [port, beaches and related recreational areas] of Ostend city attracts people from all over Belgium, and its airport plays an important role in the local employment related to commercial and industrial activities. Established as a landing strip during the 1940s, the Ostend airport has grown to become the second largest airport in Belgium. The Flemish government wants to develop and expand the potential of the airport further through 'privatization' as part of the Flemish network of regional airports to spread passenger and freight traffic strategically (Flemish Government, 2009; SERV, 2006). Already over the last two decades, there has been a progressive increase in the expansion of economic activities around the airport, which has provided a base for commercial enterprises, providing employment opportunities (not only) for local residents. Its privatization is anticipated to result in more (air-) traffic due to increase in intensity of use and possible expansion of the airport and related economic activities infrastructure. Local residents anticipate that the quality of life might be threatened by associated noise pollution, possible change in land-use for economic purposes generating further traffic nuisance. Since 1992, the local residents have organized themselves as a workgroup [WILOO] opposing further expansion/intensification of the airport. In 2001, REPLO has been founded as a counteraction of the foundation of WILOO, which supports the

airport expansion and further intensification of economic activities around it. The Flemish government's search for a private investor for the economic exploitation of the airport since 2008 (REPLO, 2011) has triggered the conflict afresh between the local resident's interests and the economic interests of entrepreneurs and the Flemish government.

Widening of the 'Schipdonk' canal is the second case analyzed in this chapter. Constructed back in the mid 19th century, the canal is situated in the provinces of West and East Flanders provinces in the northwest of Belgium, which connects the Port of Zeebrugge with those of Ghent, Bruges and Ostend. As a major infrastructure work, the canal played a crucial economic role that began to decline after the Second World War, however its value as landscape and cultural heritage has increased progressively. Ideas and plans to widen the Schipdonk canal exist since the 1960's, but have not been implemented as such. However, due to the recent economic growth of Zeebrugge harbour, the Schipdonk canal is seen as offering a high potential to support the underdeveloped inland-transport from the harbour, and as an alternative to road based transport. According to the port authority and the Flemish government, the canal has reached its capacity limits and needs to be widened and deepened to avoid traffic congestion and boost economic activities in the area. As a water-based transport infrastructure, the new canal project is presented as a sustainable solution for addressing the mobility growth and increasing industrial/economic activities, and also as a way to link Zeebrugge harbour with the "Seine-Schelde-West (SSW)" network connecting the Schelde mouth and northern France. However, its impact on the picturesque historical landscape and water management in the area has generated a massive resistance from across the civil society and environmental groups. Despite the lack of a societal support for the project, the Flemish Government announced that in 2011 a final decision would be made for or against the widening of the Schipdonk canal. At this stage, the conflict is beginning to deepen among the proponents of the project [mainly Flemish government and economic actors] and the local residents, environmental and other civil society groups.

The third case analyzed in this chapter is about the Strategic harbour Infrastructure Project [SHIP] aimed at the inland expansion of the Zeebrugge port located in the Brugge study area. The project announced in 2004 by the Flemish Government to boost economic development will cover an area of 700ha, which includes the construction of new docks, roads and a new rail-road bundle. Implementation of the project has generated several land-use change conflicts, the most important one being the destruction of 362ha of nature / partly

protected area and open space. Since 2005, a commission has been established [institutionalization of the conflict] under the aegis of the 'Vlaamse Landmaatschappij' [Flemish Land Agency - VLM] to re-establish the lost nature, which has so far purchased 240 ha of agricultural land for this purpose and the remaining is still to be arranged. Other impacts include the expected direct and indirect increase in employment in industrial and commercial activities leading to land-use changes; increased traffic to and from the area with anticipated rise in pollution and nuisance levels threatening to reduce the quality of life and environment of the local residents, and increasing the stress over natural resources and coastal open space.

All the three cases are characterized mainly by economic development interests vs. environmental protection and also include aspects of human mobility. The conflicts are mainly triggered by the initiation of these infrastructural projects that are being imagined to unfold greater economic prosperity in the otherwise economically depressed coastal region of West Flanders province. The infrastructural logic of improved connectivity and efficiency for reducing the cost of doing business [increased economic development] is a short term interest that is in conflict with the long term benefits of the coastal nature and resources, landscape heritage and anticipated damage to the sustainability of natural eco-system and its services. Seen from the perspective of environmental sustainability, global climate change and accompanied sea level rise, all the three projects - and specifically the harbour expansion - will make the coastal area more vulnerable to natural hazards, trigger more competition and intensive use of natural resources, generate increased flows [human mobility, traffic, investment, land and real estate values, etc.], and jobs and population growth. Their accumulative negative effects on the quality and quantity of the 'open space' [nature and agriculture] and pressure on 'urbanized area' are inevitable, which is generating and transforming a series of conflicts. Underpinning the detailed analyses of the three cases presented in this chapter is the main argument that an in-depth understanding of the nature of these conflicts - the way they are constructed and evolved, their thematic and typological classification, their current trends and possible future impacts - is not only a prerequisite for their resolution but also for imagining alternative and more sustainable futures in the coastal urban environment.

2. Methodology

Complex issues and societal dynamics are involved in the construction of conflicts. A methodological structure developed within the framework of SECOA research project that is appropriate for analysing such conflicts is employed that consists of four parts: (i) defining and identifying, (ii) analysing (iii) classifying [thematically and typologically] and (iv) ranking the conflicts. The implementation of this structure for analysis is facilitated by a generic set of questions: What are the conflicts about? (anticipated economic, social and environmental effects); Which parties are involved in the conflict? (Who are they, what are their aims?); How do the conflicts evolve through time (what has been done, what were the results, what will be done?); Which alternatives exist? (What are the effects of the different alternatives?); How do the different parties interact? (Are there coalitions being formed? Do the opponent parties have contact with each other? How is information spread through all parties? Who plays a passive and who plays an active role? Which instruments and strategies are being used, by the different parties, to defend their point of view? Who “wins” the conflict in the end?); What are the common patterns (and differences) in each conflict? The intention behind this methodological structure and questions is to develop a scientific, objective and comparable understanding of the emergence and evolution of conflicts.

For identification of the conflicts, semi-structured interviews with SECOA end-users / stakeholder including different governmental institutions and NGO's involved in nature preservation and/or economic development at the Belgian coast and inhabitants of Zeebrugge and Ostend have been conducted. Through analyzing the answers, the most frequently mentioned cases are what allowed us to single out the three cases presented here, which allows covering in a varying degree of relevance, the following three themes:

- Economic development (ED) *versus* environmental protection (EP) (all three cases);
- Preservation of natural sites and biodiversity (PNSB) (Zeebrugge harbour expansion).
- Contrasts for the use of resources between residents and new comers for processes of human mobility (HMR) (privatization of Ostend airport).

For defining and analyzing the conflicts, further data and information was collected through interviews with stakeholders and focused reviews of relevant literature, media coverage, official reports from governments and NGOs, and web-based resources. Within the geographical area of each case, the available resources and their uses have been traced through the previous research stage in the SECOA project [deliverable 4.1] and on maps of protected

nature areas (biodiversity, habitats, nature valuation maps), zoning maps, topographic maps, aerial photographs and by means of terrain observations. For each case, at least 5 experts have been invited to fill in an online-questionnaire with specific questions about the conflict. The analysis of the parties involved follows the stakeholder analysis approach as suggested by SECOA WP-4 guidelines (2010). For this purpose, people and actors are chosen that are representative of a diversity of views: opponents and proponents of the project; parties with environmental, economic and social motivations. The analysis of the parties involved (their visions and networks, see table 3.1) has been performed, based on the results from the online-questionnaires (see below, ranking).

Table 3.1. *Analysis framework for understanding the coalitions and networks between parties involved in a conflict.*

Coalitions / Networks formed					
Between different scales [local, regional, national, etc.]; inter / intra NGOs & non-profit; NGO & other levels of government, trans-local, etc.					
Parties	Interests	Goals	Positions	Capacities	Relationships
	Their combined motivations (in relation to the causes and other parties in the conflict)	Shared strategies to pursue their interests	how they place themselves in the conflicts, especially in any intervention?	their potential that can affect the context of the conflict (both positively and negatively). This can be resources, access, social networks, alliance, etc.	the interactions of the stakeholders within coalition and their perception of the interactions

For typological classification of the conflicts, Cadoret (2009), Chandrasekharan (1996), Rupesinghe (1995) and Warner (2000) have been followed. Cadoret's classification is used for typifying the conflict's *manifestation over time* as "Chronic", "Anticipation", "Hushed" [or "Deferred"], and "Hybrid". Chandrasekharan's classification is used for typifying the underlying cause, which includes: Infringements over access, Change in resource quality and availability, Authority over resource, Conflicts that are Value based, Conflicts associated with information processing & availability, and Legal / policy reasons. Rupesinghe's classification is used to look at different stages of the conflict: Formation, Manifestation, Endurance, Management, and Transformation. Finally, Warner's typologies are employed to ascertain the conflict's scales: Intra micro-micro conflicts, Inter micro-micro conflicts, and Micro-macro conflicts.

For ranking the conflicts, Delphi method (Geist, 2010; Gupta & Clarke, 1996; Linstone & Turoff, 2002; Prusty *et al*, 2010) was employed. For this purpose, the online-questionnaire -

where each criterion was subdivided into indicators to allow assessment and rating - was developed through three rounds of the Delphi process. All items from the questionnaire were rated on a Likert-type scale with 5 or 7 points, allowing for ranking and comparison of all answers. Finally, the analyses and typological classification of conflicts together with the results from the questionnaires are used to rank the cases according to three criteria: criticality, urgency, and duration. The “criticality” of the conflict describes to which extent the conflict is critical to long-term development of the region/area and to which extent the conflict is an important event to local people. The “urgency” shows to which extent the conflict needs to be resolved immediately or if there is a deadline involved. The “duration” points out whether the conflict is a short-term (acute) or a long-term (chronic) event.

3. Analysis of the conflict cases

3.1 Privatization of the regional airport Ostend

3.1.1 Nature of the conflict

Ostend is a coastal seaside city, attracting people from whole Belgium for its recreational potentials. It houses one of the regional airports, which plays an important role for the local employment. The airport was established during the Second World War by the occupying Germans. Later, the Belgian government upgraded it to an international airport. In 1968, a new airport building complex was inaugurated. Since then, the airport Ostend became the second largest airport in Belgium. In 1976, the runway was lengthened to accommodate larger planes. In terms of air traffic, however, the number of passengers declined from 468,000 in 1964 to 53,000 in 1981, while freight transport climbed continuously to 50,448 ton in 1991 (number of passengers in 1991: 88,871). In 2010, 37,875 flights flew from/to the airport, carrying 213,638 passengers and 64,041 tons of freight (REPLO, 2011).

Within the network of airports in Flanders region, the airport also plays an important role at the national level, for both compartments: passenger and freight traffic. The Flemish government wants to develop the airport as part of the Flemish network of regional airports to spread passenger and freight traffic strategically (SERV, 2006; Flemish Government, 2009). The Flemish government, department of Mobility and Public Works, aims to transfer the commercial exploitation of the regional Flemish airports Antwerp, Kortrijk-Wevelgem and Ostend to private companies. The Flemish government will stay owner of the infrastructures, and intends to achieve a “balanced growth” (Vlaamse Luchthavencommissie, 2006, p.5):

economic growth of the regional airports, but with respect for the local residents (avoiding intolerable noise-levels).

Until 1992, the Federal Government of Belgium (Regie der Luchtweegen) was the responsible operator of the regional airport Ostend – a role that resides now with the Flemish government. They established a new area for airport related economic activities to the east of the airport. The runway was widened, taxiways have been added and new materials have been applied to reduce noise levels. This progressive increase in the expansion and use of the airport has provided a base for commercial and economic enterprises, providing employment opportunities (not only) for local residents.

Figure 3.1. Aerial view of Oostende Airport (VIL, 2007).



According to Flemish Government plan, the regional airport of Oostende will be privatized. This might result in more (air-) traffic due to increase in intensity of use and possible expansion of the airport. Local residents are afraid that the quality of life might be threatened by associated noise pollution, possible change in land-use for economic purposes generating further traffic nuisance.

On 1 June 1992, local residents, who did not agree with the policy makers that the airport Ostend should be expanded, or even exploited at all, organized themselves within the workgroup WILOO to lobby against the airport. In 2001, REPLO has been founded as a counteraction of the foundation of WILOO. This is a group of proponents of the regional airport Ostend. REPLO defends the economic interests of local companies (Het Nieuwsblad, 2001). Since 2008, the Flemish government is searching for a private investor for the economical exploitation of the airport (REPLO, 2011).

Table 3.2. Timeline of the conflict “Privatization of the airport Ostend”.

1940s	1992	1 June 1992	2001	Since 2008
Airport established	The Flemish Government becomes responsible for the exploitation of the airport	WILOO (a group of opponent local residents) has been founded	REPLO (a group of proponent representatives of enterprises and airport sympathizers) has been founded as a counterpart of WILOO	The Flemish Government is searching for a private investor for the economical exploitation of the airport

Thematically, this is a conflict between economic development vs. environmental protection. At the base of the conflict is the anticipation that the expansion of the airport will further cause land use changes to accommodate economic activities in the surrounding area. This might result in increased noise pollution and loss of open space that is used for recreation and crucial for maintaining environmental quality of the area. Air pollution might be caused not only by increased air traffic but also by secondary effects, like enhanced car and truck-traffic from and to the airport. Furthermore, human mobility might be affected if more jobs are created at the airport, e.g. traffic jams. More people might be attracted by increased employment opportunities, leading to increased pressure on the use of open space for housing.

According to the local, regional and Flemish government and local enterprises (some of which are organized within REPLO), the airport is of economic importance at all levels (Van de Voorde *et al*, 2006; Debisschop *et al*, 2007).

According to WILOO, the airport should not be expanded, privatized or even exploited at all. They perceive the airport as being misplaced, something which does not belong to Ostend, which does not fit within the context of a seaside resort town.

The conflict is about the use of space resource for living and seaside recreation vs. space for economic activities, and qualitative and quantitative as well. The conflict seems to be triggered by a lack of mechanisms to involve all parties in the process of decision-making for the privatization of the airport.

3.1.2 Parties involved in the conflict

In this conflict, the following main parties have been identified:

- Flemish government: Department for Mobility and Public Works.
- Airport authority (the airport is owned by the government, the airport-authority is part of the department of Mobility and Public works).

- REPLO (Regional platform airport Oostende): Established in 2001 in response to the foundation of WILOO. This is a group of proponents of the airport Oostende. The members are (local) residents and entrepreneurs who would like to see the airport growing and prospering to create jobs and economic opportunities.
- WILOO (Workgroup Impact Airport Oostende): An association of opponents of the airport Oostende, consisting of 300 local residents.
- Local residents.

Based on the stakeholder analysis approach, a description of the parties involved in the conflict is provided [table 3.3]. It includes their interests in the conflict and strategies in realizing their interests, their positions as to how they place themselves in the conflicts, especially in any intervention, their capacities to influence the direction of the conflict, and their relationships with other parties.

Table 3.3. Description of parties involved in the conflict “Privatization of the regional airport Ostend”.

Parties	Interests	Strategies	Positions	Capacities	Relationships
Flemish government	Economy, environment and society	Official reports	They are proponents of the project. They take the initiatives to act, while the other parties mostly react.	Strong	Disagree and co-operate with the Airport authority. Agree and co-operate with REPLO. Disagree and limited communication with WILOO.
Airport authority	Economy	Dialogue and public media	They are proponents of the project. They follow the decisions of the Flemish government.	Weak	Disagree and co-operate with Flemish Government. Agree and co-operate with REPLO. Disagree and frequent communication with WILOO.
REPLO	Economy	Dialogue and public media	They are proponents of the project. They support the decisions of the government and the airport authorities.	Weak	Agree and co-operate with Flemish Government. Agree and co-operate with Airport authority. Disagree and no contact with WILOO.
WILOO	Society and nature	website, brochures, pamphlets, actions, demonstrations and judicial decisions	They are opponents of the project. They react on all actions and initiatives of the other parties.	Weak	Disagree and limited communication with Flemish Government. Disagree and frequent communication with Airport authority. Disagree and no contact with REPLO.

All the parties involved have different interests that they want to pursue. The national government sees the airport as an economic driver for the regional development. The airport of Ostend is part of the nationwide network of one international airport (Brussels) and five regional airports (Kortrijk-Wevelgem, Antwerp, Ostend, Liège and Charleroi), three of the latter are currently exploited by the Flemish government. REPLO, (local) enterprises, companies and sympathizing local residents see the economic potential of the airport as an opportunity to generate and support economic activities and employment. WILOO and sympathizing local residents perceive the airport as a foreign entity to Ostend that is a disturbing element, causing noise and traffic nuisance.

To defend their interests, the parties involved pursue different strategies. The proponents REPLO and the Airport authority regard dialogue and public media as important instruments to reach their goals. Whereas, the opponent WILOO uses their website, brochures, pamphlets, actions, demonstrations and judicial decisions as instruments to pursue their interests.

However, both the proponent REPLO and the opponent WILOO do not have many capacities that can strongly influence the course and outcomes of the conflict. All decisions seem to be made autonomously by the Flemish government. The parties involved interact and form various coalitions to strengthen their position and capacity. The proponents REPLO and the airport authority frequently communicate and co-operate with the Flemish government. The opponents rarely have contacts with the Flemish government, but they do have contacts with the local government at the municipality level. WILOO perceives the government as not cooperative.

While both organizations REPLO and WILOO do have close contact with the airport authority, communication between REPLO and WILOO is limited.

Strikingly, the airport authority does not expect the privatization to have a significant impact on the economic development of the airport. Here, they share their perception with WILOO, while REPLO believes in a strong impact of privatization in relation to economic power.

WILOO expects the privatization leading to degradation of the environment and to a decline of the quality of living in the vicinity of the airport, while REPLO and the airport authority don't expect negative effects. Table 3.4 below gives a description of the relationship between the parties involved in the conflict by classifying their coalitions into 3 types: Agree and cooperate, Disagree and communicate, and Disagree and limited communication.

Table 3.4. *Coalitions between parties in the conflict “Privatization of the regional airport Ostend”.*

COALITIONS	Flemish government	Airport authority	REPLO	WILOO
Agree and co-operate	REPLO	REPLO	Flemish Government Airport Authority	
Disagree and communicate	Airport Authority	Flemish Government WILOO		Airport Authority
Disagree and limited communication	WILOO		WILOO	Flemish Government REPLO

3.1.3 Typological classification

Following the classification in the “Methodology” section, this conflict is a **chronic** conflict, with recurrences of conflict episodes. WILOO reacts on every development and every change as far as the airport is concerned. They send letters to the government or try to enforce their demands by court.

It is a conflict not only about **quality and availability** of open space, but also a conflict about **authority**: The government, who is the owner of the airport now, is believed to listen to the concerns of the local residents (at least, the government is democratically elected) and should take all parties’ interests into account within their decision making process, while a private owner might be interested in economic motives only.

The conflict is in a stage of **endurance**: the discussions about the role, which the regional airport should play within the national / Flemish economic development plan, are still going on. Local residents, political parties and other institutions might still influence the further development of the airport.

It is a **micro-macro** conflict, where decisions about the overall economic development and especially about the development of regional airports in Belgium, affect the quality of life and welfare of the local residents in the vicinity of the airport.

3.1.4 Current trends of the conflict

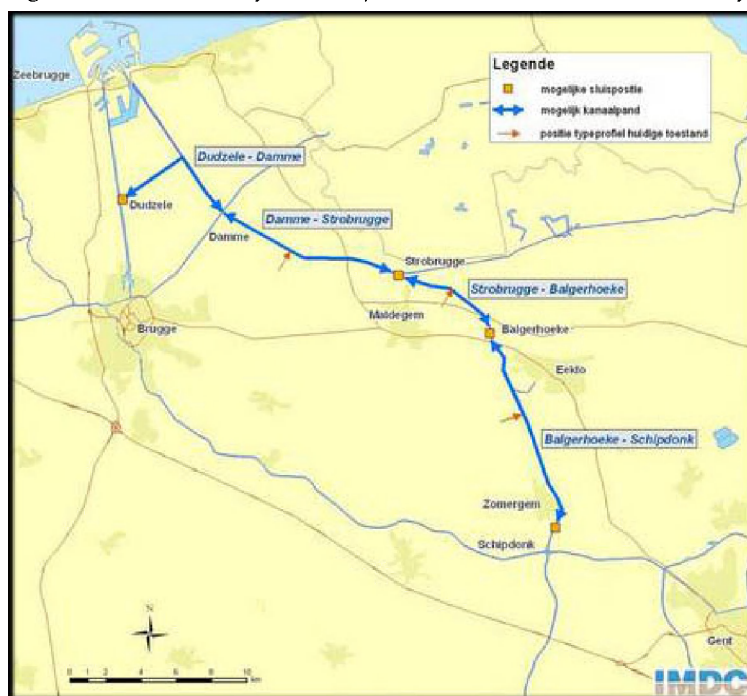
Negotiations with enterprises are on-going. At the moment, the Flemish government does not find a private investor who is willing to exploit the airport. There are no negotiations with the opponents of the privatization of the airport (WILOO). The government sticks with its plan to privatize the airport. There are no legal arguments against this plan. The only alternative would be that the government stays responsible for the economic exploitation of the airport. The results of the 2 different possible scenarios: privatization or no privatization are unpredictable.

3.2. Widening of the Schipdonk canal

3.2.1 Nature of the conflict

“Schipdonk” canal is situated in the provinces of West and East Flanders, in the north-west of Belgium, which had been trenched between 1846 and 1860 (Figure 3.2). It connects the Port of Zeebrugge at the Belgian coast with the ports of Ghent, Bruges and Ostend. Along with the Leopold Canal, it was one of the first major infrastructure works, since Belgium became independent in 1830. In the mid-19th century, the textile industry dominated the economy of the cities of Ghent and Courtrai and caused heavy pollution of the Lys River. To divert the polluted water from the centre of Ghent, Schipdonk Canal was constructed to transport the pollution directly to the Northern Sea. Another benefit from the canal involved protecting Ghent against flooding, which occurred periodically. The third significant benefit was the provision of a relatively direct water route from the industrially active Courtrai district to the North Sea. However, since the WWII, the Schipdonk canal didn’t play an important role economically.

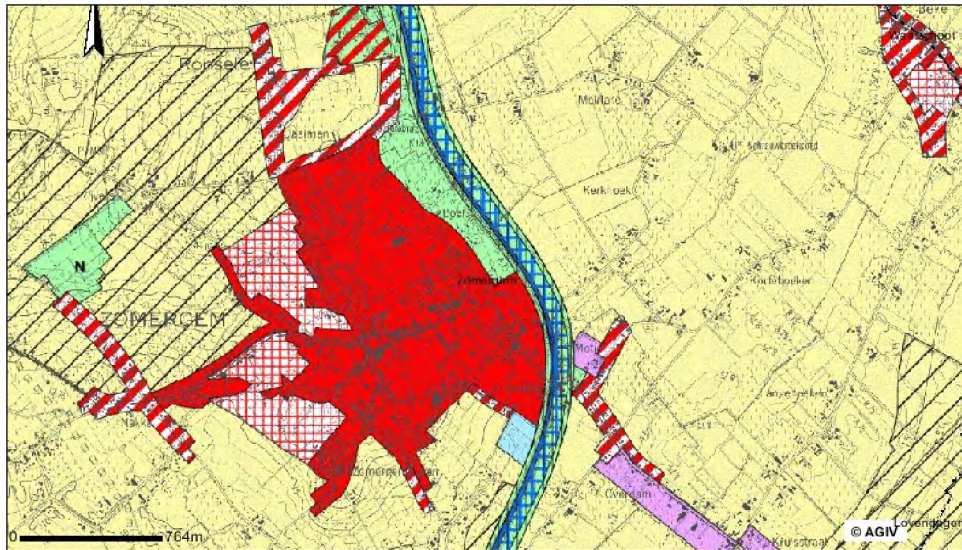
Figure 3.2. Situation of the Schipdonk canal within the network of waterways in the region (Group 3, 2011).



Plans to widen the Schipdonk canal exist since the 1960’s. The original idea was to use the canal as a link between the port of Zeebrugge and Kortrijk (and Roeselare) at the Leie. In the 1970’s the “Noorderkanaal” plan has been developed, to connect Zeebrugge with Zelzate (parallel with the N49). In this plan, a “reservatiestrook” (reservation strip) has been drawn for

the potential widening of the Schipdonk canal (see Figure 3.3). Because the discussion about the widening of the canal keeps on going for so long without any visible results, this plan is called “The ghost” by local residents.

Figure 3.3. Zoning plan Schipdonk canal nearby Zomergem; the blue raster indicates the “reservoestroom” (GEO-Vlaanderen, 2011).



On 28/ 03/ 2001 the so-called “MAIS” (Maatschappelijke impactstudie/Societal impact assessment) report has been published, which suggests the widening and deepening of the Schipdonk canal as an opportunity to “unlock” the port of Zeebrugge (Ministrie van de Vlaamse Gemeenschap, 2001). The harbour of Zeebrugge is continuously growing since WWII and especially since the 1970ies. The Schipdonk canal offers a high potential to support the underdeveloped inland-transport from the harbour, as an alternative to road transport by truck or railway or via maritime estuarine transport (via the river mouth of the river Scheldt to Antwerp), which are not sustainable and have reached their capacities. According to the port authority and the Flemish government, the canal Ostend-Bruges-Ghent has reached its capacity limits, leading to traffic chaos in the city centre of Bruges (where bridges have to be opened whenever a boat is passing by, leading to congestion of vehicles waiting for the bridges to be closed again). Therefore, the Schipdonk canal seems to offer a solution. But the canal’s capacity is limited i.e. not wide and deep enough for modern cargo ships. Also arose from the MAIS are following conclusions:

- there is a risk for salinization
- the impact of the project for shifting transport from the street (transport by trucks) to water (transport by ships) is predicted insufficient
- the costs for the project are too high to be economically efficient

However, its impact on the local landscape has generated a massive resistance from across the civil society groups, such as 't Groot Gedelf, Natuurpunt and the political party Groen!. They are concerned about the [anticipated] impacts that the project will have on the picturesque historical landscape and water management in the area. Furthermore, the project could attract industrial enterprises, which could have an impact on the quality of life of the local inhabitants. The landscape along the Schipdonk canal is quite unique in Europe (Allaert, 2008, p.80). With its ancient trees and surrounded by open farmland, it became a peaceful and attractive landscape element, used for recreational boating, hiking and biking activities on the quiet, traffic-calmed roads alongside the canal. The local residents living in the vicinity of the canal, appreciate the picturesque landscape and the quietness of the area.

Figure 3.4. Photographs of the Schipdonk canal at different locations between Zomergem and Damme, taken by the authors on 9 May 2011.



Due to protests from the left wing party “Agalev” (now “Groen!”), the “Boerenbond” (Farmer’s alliance) and due to a lack of societal support, the idea of the Noorderkanaal was abandoned in 2004 (Agalev Zomergem, 2001; Boerenbond, BBL, Natuurpunt, 2009). In 2006, a new plan has been proclaimed by the Flemish Government: “Seine-Schede-West (SSW)”. This is a potential network of waterways which would provide an inland connection between the Schelde mouth and northern France. The Schipdonk canal is now thought to be an important link to connect Zeebrugge with the SSW network. The main aim of this project is to change the modal split of hinterland traffic in favor to transport via waterways as a substitute of the unsustainable road transport.

The workgroup “’t Groot Gedelf” has been founded in 2007 by local residents. Their main argument against the SSW project (and therefore against the widening of the Schipdonk canal) is that on the trajectory to Northern France there are over 30 bridges which cannot be under-passed by container ships. Therefore, the project is considered to be not realistic.

In 2008 the “Maatschappelijke Kosten-Baten Analyse (MKBA)” was published, with a positive result for the plans to widen the Schipdonk canal. In 2009, the plan MER (report on environmental effects) was rejected. Despite the lack of a societal support for the project, the Flemish Government (department MOW) announced that in 2011 a final decision would be made for or against the widening of the Schipdonk canal.

On 3 April 2011 local action groups sent an open letter to the Flemish minister for mobility and public constructions, Hilde Crevits, asking her to stop all plans for the widening of the Schipdonk canal. The arguments against the canal are based on the consequences of a wider canal:

- loss of valuable landscapes
- loss of recreational space
- loss of quality of living
- loss of positive landscape perception
- risk of salinization
- risk of water level declination
- doubts about the economic efficiency of the project

According to the opponents of the project an alternative for this project would be a combination of the following transport options:

- a capacity improvement of the existing canal Ghent-Ostend,
- increased estuarine traffic via the Northern Sea and the river Scheldt between Zeebrugge and Antwerp, and
- a shift of the modal split for transportation of goods, from the harbour to the hinterland, from road- towards railroad transportation.

Table 3.5. *Timeline of the conflict “Widening of the Schipdonk canal”.*

1960's	1970-2000	2001	2004	2006	2007	2011
A reservation strip has been drawn in the zoning plan which foresees the widening of the Schipdonk canal	Different strategic plans have been made to widen the Schipdonk canal	“MAIS” (Maatschappelijke impactstudie/Sociaal impact assessment) report has been published, which suggests the widening and deepening of the Schipdonk canal as an opportunity to “unlock” the port of Zeebrugge	Due to protests from the left wing party “Agalev”, from the “Boerenbond” and due to a lack of societal support, the idea of widening the canal was abandoned in 2004	A new plan has been proclaimed by the Flemish Government: “Seine-Schede-West (SSW)”, which foresees in the widening of the Schipdonk canal as an essential element of SSW.	The opponent workgroup “t Groot Gedelf” has been founded in 2007 by local residents	The Flemish Government (department MOW) announced that within this year a final decision will be made for or against the widening of the Schipdonk canal.

Thematically, this is a conflict about **economic development vs. environmental protection**. By widening the canal, valuable landscapes (rows of ancient trees) will be destroyed, which might be irreplaceable. The quality of life for the local residents will be affected negatively. The perception of the surrounding area will be degraded by this project. Open space used for economic activities might be expanded at the cost of open space for nature and recreation. Air pollution and increased traffic intensities might occur if the widened canal attracts new enterprises. Farmers are especially worried about a declining groundwater level and salinization, caused by a wider canal and the intrusion of seawater.

In term of mobility, human mobility will change if more jobs are created along the canal, which might cause traffic jams. More people might be attracted to live in the area for the working opportunities. Cargo transport by road to/from Zeebrugge might be reduced in favor of (environmentally friendlier) cargo traffic by boat. The existing traffic of ships on the canal Ghent-Bruges causes traffic jams in Bruges, where bridges have to be opened, whenever ships are passing.

3.2.2 Parties involved in the conflict and their description

Politically, two camps have developed over the years: The green party is an opponent of the project. They want to keep the nature and landscape values intact. They perceive open space and tranquillity as a scarcity in the Flemish landscape, which has to be protected from economic development. The centre-right party CD&V perceives the canal as an essential element for the future development of the port of Zeebrugge. According to them, capacity enhancement of the port of Zeebrugge must be accompanied by an improvement of the hinterland transportation capacities, which can only be accomplished by a capacity improvement of the Schipdonk canal.

According to the opponents of this project, widening the canal would result in the loss of a unique landscape, because the canal is aligned by rows of ancient trees, which contribute in a significant way to the landscape perception of local residents and tourists, who use the canal for leisure boating and the traffic-calmed roads alongside the canal are being used for hiking and biking. Furthermore, deepening and widening of the canal will lead to salinization and ground water level decline, endangering the surrounding farmland.

Thus, in this conflict, the objectives of the Flemish government (at least its departments for inland shipping, the port-authority of Zeebrugge and the department for public works and mobility) are the opposite of the objectives of local residents and farmers: it's a conflict about 'yes' or 'no' (the canal will be widened or not).

Mechanisms to involve all parties in the process of forming a decision for or against the widening of the canal do exist under the form of the obligation for the government to announce all planned infrastructure projects in public. After the announcement, every Belgian citizen is entitled to formulate objections against the project. Furthermore, the government is obliged to set up a report on the predicted effects of the project on the environment. This report has to be developed by independent scientists.

Within these procedures, opponents of the project are required to invest lots of time in gathering information about the project and to formulate and post fully elaborated objections. Only few people are able to overcome this threshold and are willing to invest time and energy in the conflict.

Five key-players are involved in the conflict: Flemish government, department Mobility and Public Works; department Waterwegen & Zeekanaal; Natuurpunt; 't Groot Gedelf; Local residents. Table 3.6 gives a description of their interests, goals, positions, capacities and relations toward each other.

Table 3.6. Description of parties involved in the conflict “Widening of the Schipdonk canal”.

Parties	Interests	Goals	Positions	Capacities	Relationships
Flemish Government	Economy	They use dialogue, websites and printed media to defend their position.	Proponents of the project. They are proponents of the project. They take the initiatives to act.	Strong	They agree and co-operate with Waterwegen & Zeekanaal. They disagree and communicate with Natuurpunt. They Disagree and have limited contact with 't Groot Gedelf and with the local residents.
Waterwegen & Zeekanaal	Economy	They use dialogue, websites and printed media to defend their position.	Proponents of the project. They try to avoid discussions with opponents and rely on legal documents to defend their goals.	Strong	They agree and co-operate with the Flemish Government. They disagree and have limited contact with all opponents: Natuurpunt, 't Groot Gedelf and local residents.
Natuurpunt	Nature and social	They use dialogue, websites and printed media to defend their position.	Opponents of the project. They react on each official document, which supports the project. They try to create societal and political support.	Weak	They disagree and have limited contact with Waterwegen & Zeekanaal. They disagree in most points and they communicate with the Flemish Government. They agree and communicate with 't Groot Gedelf. They agree and co-operate with the local residents.
't Groot Gedelf	Social and nature	They use dialogue, websites and printed media to defend their position. They also consider public media as being important instruments to defend their position.	Opponents of the project. They react on each official document, which supports the project. They try to create societal and political support.	Intermediary	They disagree and have limited contact with the Flemish Government and with Waterwegen & Zeekanaal. They agree and communicate with Natuurpunt. They agree and co-operate with the local residents.
Local residents and farmers	Social and nature	They use dialogue, websites and printed media to defend their position.	Opponents of the project. They play a passive role. They take part in demonstrations and other actions.	Weak	They disagree and have limited contact with Waterwegen & Zeekanaal. They agree and co-operate with 't Groot Gedelf and with Natuurpunt.

According to the questionnaire, the department Waterwegen & Zeekanaal is the strongest proponent of the project. They defend the economic importance of the widening of the Schipdonk canal and they estimate the scale of the negative impact on landscapes and quality of life as low.

The Flemish government takes a more independent position. The questionnaire's results show that they are ambivalent towards the decision whether the canal should be widened or not. In their view, the negative impact on environment and landscape is important, but they also believe in a strong positive economical impact of the project.

Natuurpunt WVL, 't Groot Gedelf, local residents and farmers are strong opponents of the project. They don't believe in a strong positive economical impact of the project but they fear a very strong negative impact on the environment, landscapes and quality of life.

All parties involved in this conflict claim that they consider dialogue as a very important tool to defend their positions. They consider printed information and websites as important tools to explain their position and motivation in this conflict and to draw the attention of a wider public. The opponents of the project ('t Groot Gedelf and Natuurpunt) considered public media, such as radio- and TV- interviews and newspaper articles as important tools to defend their positions, while the government and Waterwegen & Zeekanaal were more sceptical about the importance of these media to defend their position.

The proponents of the project try to support their position by means of official reports, such as the MAIS, MBKA and MER. They consider these reports as being objective and sound. The opponents mainly react on each official documents by searching for mistakes and inconsistencies in these reports to weaken the argumentation of the proponents. The opponents try to create societal support, as well as from political parties as from local residents and farmers, to prevent the plan from being executed by using their political and societal power to influence the democratic decision making progress towards their position.

All proponents consider their capacities as "strong", while most opponents consider their capacities as "weak" or "very weak" ('t Groot Gedelf considers it's capacities as "intermediate").

The opponents search for partners in their network among local residents, farmers, political parties, environmental NGO's and environmental governmental departments. The proponents rely on a network of representatives from enterprises, economical motivated governmental departments and politicians who share their opinion.

The opponents perceive the proponents as not cooperative in any discussion, while the Flemish Government considers its own attitude as open, cooperative and democratic.

The local residents perceive the whole decision making process as a top-down system. According to the interviews with local residents, they unanimously consider their position as powerless and over-ruled. Their attitude is merely passive, although they embrace each opportunity to raise their voice by means of signing petitions or participate in demonstrations. Table 3.7 describes the coalitions between parties in the conflict “Widening of the Schipdonk canal”.

Table 3.7. *The coalitions between parties in the conflict “Widening of the Schipdonk canal”.*

COALITIONS	Flemish government	Waterwegen & Zeekanaal	Natuurpunt	’t Groot Gedelf	Local residents and farmers
Agree and co-operate	Waterwegen & Zeekanaal	Flemish Government	’t Groot Gedelf Local residents and farmers	Natuurpunt Local residents and farmers	Natuurpunt ’t Groot Gedelf
Disagree and communicate	Natuurpunt		Flemish Government		
Disagree and limited communication	’t Groot Gedelf Local residents and farmers	Natuurpunt ’t Groot Gedelf Local residents and farmers	Waterwegen & Zeekanaal	Flemish Government Waterwegen & Zeekanaal	Flemish Government Waterwegen & Zeekanaal

3.2.3 Typological classification

This is a **chronic** conflict, with recurrences of conflict episodes. The discussion about the widening of the Schipdonk canal goes on since the 1960’s. Until now, each attempt to put this project into reality has been successfully counteracted by opposition of local residents.

It is a conflict about **quality and availability** of open space. The conflict is in a stage of **formation**: No binding decisions have been made yet. It is a **micro-macro** conflict: the enhancement of the capacity of the canal will affect the quality of life and welfare of the local residents in the vicinity of the canal.

3.2.4 Current trends of the conflict

The current minister of the Flemish government for public works and mobility announced that a final decision would be taken during 2011. The action group “’t Groot Gedelf” keeps on protesting against the widening of the canal. Nothing has been done yet to solve this conflict. The conflict is ongoing. The alternative: estuarine marine transport in combination with

railway transport will be discussed and studied, following the mandatory, institutionalized and formal procedure for environmental impact analysis.

If the canal will be widened, the environmental and social impact will be huge, while the economic impact is difficult to be predicted. No reliable measurements exist for the impact of the widened canal on the future modal transport mix from the harbour of Zeebrugge to the hinterland. If the canal stays as it is, the economic impact will be limited, because alternatives for inland transport from the harbour of Zeebrugge exist and they are economically feasible.

3.3 Expansion of the inland harbour of Zeebrugge

3.3.1 Nature of the conflict

In the late 1960's, Zeebrugge's role as an important port for Belgium started to take off.

From 1964 onwards, ferry services for passengers and freight from Zeebrugge to Dover and Felixstowe were organized. The new harbour of Zeebrugge was officially re-opened on 20 July 1985, adapted to receive modern oil tankers, container ships and roll on/roll off cargo. In 1999, the Flemish government published its global strategic plan for the further development of the harbour of Zeebrugge.

Globalization and economic growth results in the rise of importance of harbours within the overall national economic activities in Belgium. The harbour of Zeebrugge is one of the four sea-harbours of Belgium (Antwerp, Ghent, Oostende, Zeebrugge). Between 1985 and 2000, transport of goods in the harbour of Zeebrugge has risen from 14 million tons to 35,5 million tons. 50% of its transport activities are based on container traffic. In 2008, 10% of all jobs in the 4 Belgian marine harbours are situated in Zeebrugge, and 16% of goods throughput (Nationale Bank van België, 2010). The harbour grew by 8% between 2003 and 2008 in term of monetary added value.

Plans to expand the harbour exist since the 1960s, and have been integrated in the Flemish zoning plan. Therefore, some areas were not used for human activities and have been developed naturally into biologically valuable habitats. This nature area has partially been protected by national and European laws. In 2001, the green political party "Groen!" asked not to develop the harbour of Zeebrugge any further, because valuable nature areas were situated within the harbour development area.

Despite this request, in 2004 the strategic harbour infrastructure project (SHIP) has been announced by the Flemish government. This plan foresees further development of the inland harbour to improve the short-sea capacity. Therefore, to the south of the existing deep-sea

harbour of Zeebrugge, a lock (the “Visartsluis”) will be removed to create a limited tidal harbour between the Visartsluis and the “Carcokesite” (see map). Furthermore, the docks “Prins Filipdok” and “Oud-Ferrydok” will be filled and used for shortsea activities. New dykes and quays will be constructed to prevent the surrounding of the new tidal harbour from being flooded. At the southern far end of the tidal harbour, a new lock will be created to connect the tidal basin with the existing dock “Verbindingsdok” and the canal “Boudewijnkanaal”. The canal and the dock will be deepened and widened. To improve hinterland access, a new railroad bundle will be constructed nearby the village Zwankendamme (Naert, 2007).

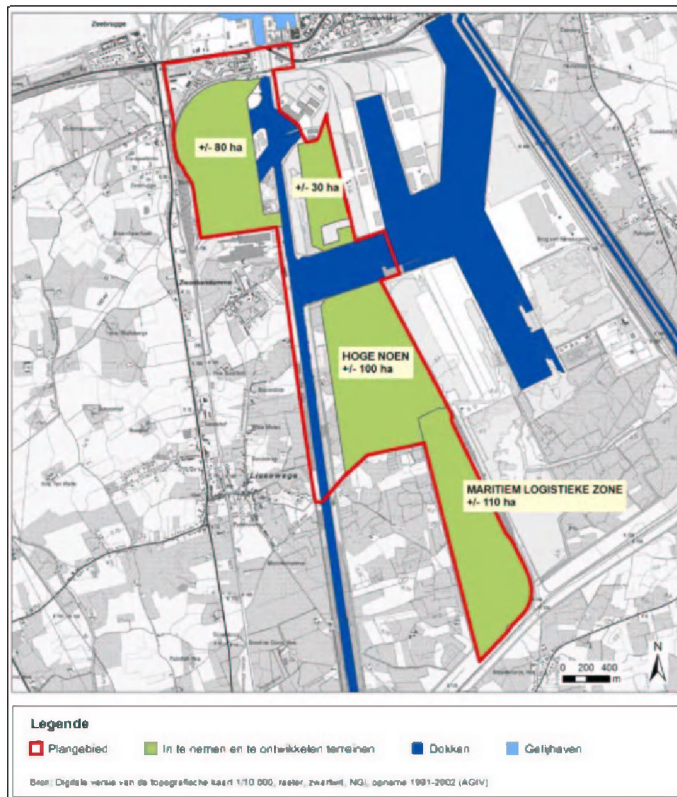
Due to these works, an area of 362ha of valuable open space and partly protected nature will be destroyed. The protected area consists partly of European Birds directive: the so-called “Poldercomplex” (Europa, 2011) and partly of ecological protected areas, based on the Flemish decree for Nature conservation from 1997.

Figure 3.5. Aerial photograph of the development area (<http://www.ministerhildecrevits.be/>).



In April 2005, an agreement has been signed between the Flemish government, the port authority and the “Vlaamse Landmaatschappij” (VLM) (Flemish Land Agency). The VLM is responsible for the nature compensations. On 21 June 2005 the “management commission for nature compensations for the inland harbour of Zeebrugge” has been established. The commission has to search for areas, where 362 ha nature can be re-established. In detail, the following values have to be re-established: 65 ha swamp, 144 ha grassland with silt elements, 144 ha polder grassland and 9 ha brackish pools.

Figure 3.6. Project area inland port of Zeebrugge (Technum, 2008, p.18).



Until now, 240ha of open space (presently used for agriculture) have been purchased by the VLM to be re-established as nature area. But while the works in the harbour are continuing, 189ha are still not established as nature-area (VLM, 2010; VDAB, 2010). To ease this deficit, a conversion from 'Polder grassland' to 'silt grassland' has been performed, resulting in a smaller area which has to be re-established. Furthermore, new areas will be purchased by the government from local farmers at a higher pace (Flemish government, 2010).

This conflict results from concurrent use of the space resource for nature, housing and harbour activities. Housing is not threatened by a lack of quantity of space but by perception of the landscape and quality of living, due to predicted rise of noise levels in the vicinity of the planned railway track bundle at the village of Zwankendamme. According to the local residents, the Flemish government does not listen to their argumentation. The local residents think that an alternative location is feasible.

The use of space for nature is in direct conflict with the use of space for harbour activities. While harbour activities cannot take place elsewhere, nature seems to be re-locatable,

according to the laws of the Flemish government. Therefore, protest from the green party does not have any consequences and nature activists are powerless.

This conflict is triggered by the powerful position of the port authority and of department of public works and mobility: The proponents perceive their plans to expand the harbour as being legally faultless, because the zoning plan foresees the project area as being developed for harbour activities. The opponents have no legal power to object against this project, especially not against the destruction of natural sites. The government believes that the nature area is fully replaceable at another location. Therefore, they perceive objections against the expansion of the harbour as unfounded.

Thematically, this is a conflict about **economic development vs. environmental protection** and about **preservation of natural sites and biodiversity**. The harbour will be expanded into a nature conservation area (Bird protection at European level: RAMSAR) and into natural valuable green areas. The natural values are thought to be replaceable elsewhere, by nature compensation works, but apparently, available and suitable spaces are limited at the densely inhabited Belgian coast.

Human mobility might be affected if more jobs are created in the harbour, which might cause traffic jams. More people might be attracted to live in the area by enhanced working opportunities. Cargo transport by road to/from Zeebrugge might be reduced in favour to (environmentally friendlier) cargo traffic by boat and railway. On the other hand, the extended capacity of the harbour might lead to more road traffic, even if the modal split for inland transport of goods from the harbour should shift from road to railway and/or waterway.

Table 3.8. Timeline of the conflict “Expansion of the inland harbour of Zeebrugge”.

1960s	20 July 1985	1999	2001	2005	2011
The port starts to play an international role	The new harbour of Bruges/Zeebrugge is officially opened	The Flemish government publishes it’s global strategic plan for the further development of the harbour of Zeebrugge	The green political party “Groen!” asks not to develop the harbour of Zeebrugge any further	The VLM becomes responsible for nature compensations to re-establish destroyed nature areas	189ha of nature area are still not established

3.3.2 Parties involved in the conflict and their description

In the analysis of the parties involved [table 3.9], the focus is on three key-players: Mobility and Public Works [including port development authority], Leefmilieu, Natuur en Cultuur (VLM) and Leefbare Polderdorpen vzw.

Table 3.9. *Parties involved in the conflict “Expansion of the inland harbour of Zeebrugge”.*

Parties	Interests	Goals	Positions	Capacities	Relationships
Mobility and Public Works	Economy	They stick to the legal administrative course, which is delineated by the national laws for projects like this one.	Pro	Strong	They search for compromises with VLM. They disagree and have limited contact with Leefbare Polderdorpen.
Leefmilieu, Natuur en Cultuur (VLM)	Nature	As a governmental department, they follow the governmental decisions.	Ambivalent	Weak	They agree and co-operate with the Flemish Government.
Leefbare Polderdorpen vzw	Social	They search for visibility of their goals. They try to spread information about the project in combination with their criticism about it. They use all channels for their information campaigns: actions, like demonstrations, pamphlets, posters, petitions, information meetings etc.	Ambivalent	Intermediary	They disagree and have limited contact with the Flemish Government. They agree and have limited contact with VLM.

The Flemish government, department for Mobility and Public works and the port authority are the initiators of the project. The Flemish Government claims an intermediary position among all parties. The government established the strategic plan for the development of the harbour of Zeebrugge, in which they proclaim that space for living will be protected to a maximum extent, while natural space will be kept and strengthened and space for economical activities will be used in an efficient way. To put this intention into reality, the different departments of the Federal government (housing, nature conservation and public works) will have to co-operate to find optimal solutions, with a maximum profit for all 3 departments.

The VLM is responsible for the nature compensations and needs to compensate the area of valuable and protected nature, which will be destroyed in favor of economic activities.

The action committee “Leefbare Polderdorpen vzw” (Livable Polder Villages society) protests against the location of the planned railway track bundle nearby the village of Zwankendamme. According to this group of local residents, the noise-level will rise intolerable in the vicinity of the railway tracks, which will be located as close as 300m from the village.

The NGO “Leefbare Polderdorpen vzw (LP)” wants to keep the quality for housing in the area intact, and is particularly focused on the future change of quality of living, in terms of landscape perception, mobility and noise levels. The open green spaces, which will be occupied by harbour activities, will change the perception of the area for the local residents. LP especially criticizes the plans for the new railway yard at Zwankendamme, which will cause noise pollution in the area. They focus on local residents, living in the direct vicinity of the project area, and search for alternatives with less negative impacts on the local residents, such as alternative locations for the planned railway track bundle (“Pelikan” instead of Zwankendamme). They agree that the expansion of the inland harbour of Zeebrugge is economically important.

The NGO “Natuurreservaten vzw” criticizes the insufficient nature compensations, as well qualitative as quantitative.

All parties claim dialogue as the most important instrument to solve this conflict. But the local residents, represented by LP, feel as if the government does not take their ideas and desires into account.

Because the government and port authority are legally supported by national laws (the development of the inland port was foreseen in zoning plans since over 40 years (Groen vzw, 2001), the capacities for the opponents of the SHIP-project are very limited.

The number of local residents, directly affected by the project, is limited. There is no political party in the (local) government, defending the wishes of the local residents.

Within the Flemish government, there are internal conflicts between the three departments of housing, nature conservation and economy. These conflicts are being tackled by strong relationships and permanent contacts, ongoing discussion and easy availability of information among the different departments.

Table 3.10. Coalitions between parties in the conflict “Expansion of the inland harbour of Zeebrugge”.

COALITIONS	Mobility and Public Works	VLM	Leefbare Polderdorpen
Agree and co-operate			
Disagree and communicate	VLM	Mobility and Public works	
Disagree and limited communication			Mobility and Public works

4. Ranking of the conflicts

The intention behind ranking of the three conflicts is to understand which conflict requires the most attention by the government, and compare them according to the predicted scale and urgency of the impact of the different conflicts. The ranking also reveals which conflicts require immediate action to solve the conflict, and thus valuable for policy makers to detect priorities for their actions.

Two ways of ranking were used. “Absolute” is the rank per conflict. If a certain type dominates, it is ranked with xxx, if a type is applicable to a limited extent only: xx, if a type does not apply: x. Then under “Ranking”, the conflicts are compared: for each type of conflict, the conflict which corresponds most with a certain type is marked with: xxx, the second most corresponding conflict is marked with: xx, the least corresponding is marked by: x. The column “Total” contains the counted sum of all marks (“x”) for each conflict.

Table 3.11. *Ranking of the 3 conflicts, by type.*

Case	ED vs. EP		PNSB		HMR		Total	
	Absolute	Ranking	Absolute	Ranking	Absolute	Ranking	Absolute	Ranking
Airport Ostend	xx	x	x	x	xxx	xxx	6	5
Schipdonk canal	xxx	xxx	x	xx	x	x	5	6
Port Zeebrugge	xxx	Xx	xx	xxx	xx	xx	7	7

In table 3.12, the 3 conflicts are compared and ranked based on the 3 criteria: criticality, urgency and duration. The column “Absolute” shows the rank for each conflict: if the conflict is critical, it is ranked with xxx, if it is critical to a limited extent: xx, not critical: x. The column “Ranking” ranks the conflicts in comparison with each other: the most critical conflict: xxx, the second critical conflict: xx, the least critical conflict: x – analogue for the other 2 criteria urgency and duration. The column “Total” contains the counted sum of all marks (“x”) for each conflict.

Table 3.12. *Ranking of the 3 conflicts on 3 criteria: criticality, urgency and duration.*

Case	Criticality		Urgency		Duration		Total	
	Absolute	Ranking	Absolute	Ranking	Absolute	Ranking	Absolute	Ranking
Airport Ostend	xxx	xx	x	xx	xxx	xx	7	6
Schipdonk canal	xx	x	x	x	xxx	xxx	6	5
Port Zeebrugge	xxx	xxx	x	xxx	xxx	x	7	7

The ranking shows that the conflict “Privatization of the Ostend airport” is **not critical**, because the role of the airport within the overall economic output of all Belgian airports is relatively limited.

The conflict “Widening of the Schipdonk canal” is **quite critical** for the regional development, although to a lesser extent than the scale enhancement of the harbour of Zeebrugge, where secondary effects of the project will be more severe than for the Schipdonk canal. On the other hand, to realise the SHIP project, the widening of the Schipdonk canal might be an important element to make the SHIP project economically efficient.

The conflict “Expansion of the inland harbour of Zeebrugge” is an important event at the national scale, economically. The conflict is **critical** for the regional development. For the long-term development of the harbour of Zeebrugge, this project is crucial, since the future harbour capacity depends on this project (or its alternatives). Solutions for the short-sea activities have to be found. Environmentally, the conflict is limited to the local level. If the nature compensations can be put into practice, the overall effect of the project won't be negative. The impact on landscapes, perception and quality of living will be limited to the direct surrounding of the inland harbour, if existing infrastructures (highways, waterways, railways) are sufficient to handle the growth in transport volume from and to the harbour. If the existing infrastructure is not sufficient, secondary effects of the projects might affect a much wider area (see: Schipdonk-canal conflict).

In term of urgency, there is **no urgency** to solve the conflict “Privatization of the regional airport Ostend”, because no immediate potential damages or dangers could be detected. As for the “Widening of the Schipdonk canal”, the **urgency** to solve this conflict is **limited**, because alternatives for this project exist, which should be discussed and compared first. The conflict “Expansion of the inland harbour of Zeebrugge” has to be resolved immediately. The works in the harbour have started already, while nature compensations cannot fully be established. The problem has to be solved **urgently**: the destroyed nature has to be re-established immediately, otherwise bird populations might be threatened.

In term of duration, “Privatization of the regional airport Ostend” is a **chronic** conflict, which goes on especially since the 1980's when air-traffic began to play an important role in the economic development of the country. The capacity of the airport and the amount of flights has been enhanced ever since. The plans for privatization are only the most recent step in the ongoing economic development of this regional airport. According to WILOO, the discussion

about privatization of the airport Ostend started in 1994, when private investors invested 3 billion Belgian Francs (7,4 Mio. €) (De Kustkrant, 1993). According to the airport authority, plans for privatization exist since 2003.

The “Widening of the Schipdonk canal” is a **chronic** conflict, which goes on since nearly 50 years. Meanwhile, the “Expansion of the inland harbour of Zeebrugge” is also a **chronic** conflict, which goes on since 1985. Since then, the harbour has been expanded continuously.

Table 3.13 consolidates the results of table 3.11 and table 3.12. The results from ranking by type and by trend are translated into a range of values between 1-3: the case with the lowest ranking gets value “1”, the highest rank is translated into “3”. The column “total” contains the sum of the rankings from the two tables for each case. The case with the highest total ranking value (port of Zeebrugge) requires the most attention from policy makers or other institutions who could provide mediating mechanisms to solve the conflict.

Table 3.13. Final ranking.

Case	Type	Trend	Total
	Ranking	Ranking	Ranking
Airport Ostend	1	2	3
Schipdonk canal	2	1	3
Port Zeebrugge	3	3	6

5. Conclusions

Although all of the three environmental conflict cases show thematic similarities (economic development vs. nature, and human mobility), the nature of the three cases is quite different:

The privatization of the airport Ostend is a managerial, structural decision to be taken, with indirect impacts on the environment and human mobility. The possible future impacts are difficult to predict.

The widening of the Schipdonk canal directly affects historical landscapes and landscape perception. The environmental consequences can be calculated and are quite predictable in an objective way. The economic impact is difficult to be predicted in an objective way, because future traffic figures and future modal split for hinterland transportation are unpredictable. Therefore, the opponents and environmentalists do have clear and reliable

arguments against the project, while the proponents cannot promise any positive economic effect of the project.

The expansion of the inland harbour of Zeebrugge is the most advanced of the three conflict cases: it is in the stage of execution. The environmental consequences of the project can be measured in terms of destroyed area of protected nature and in terms of predictable noise-levels in the vicinity of the planned railway track bundle. The economic effects can be measured in terms of capacity for transportation of goods, but the future usage of this capacity is unpredictable.

There are nonetheless common issues, recurring in all three cases: the local residents feel a lack of communication with the Flemish government - this seems to be a chronic situation in Flanders, as it has been recognized by scientists before (for example Claus, 2003, p.72). The local residents perceive decisions being taken by the government as authoritarian, while the government perceives their behaviour and decision making procedures as open and democratic. They feel not heard by the government and decisions seem to be carried out (sooner or later), independent from the (local) public opinion.

Another common pattern, recurring in all three cases, is the way the proponents and opponents try to influence the conflict: the proponents stick to the legal procedure of formal announcements of plans, mandatory environmental and societal impact reports, rather than discussions with all parties involved. The opponents react on the published plans and reports, rather than pro-act and anticipate to plans. Their reactions express themselves in a variety of actions, ranging from lobbying, trying to raise their voice in the parliament (either personal or via political parties, if parties can be found who share the opinions of the opponents of the projects), publishing and spreading written information by means of flyers, brochures or websites and organizing demonstrations.

The sum of all rankings reveals the harbour of Zeebrugge as the project with the most important environmental impact of all three cases. On the other hand, the conflict is most intense around the Schipdonk canal. The reason therefore is that the Schipdonk canal conflict is clearly visible for many local residents. The consequences of the widening of the canal are easy to be predicted, no complex information has to be gathered to be able to estimate the scale of the consequences.

The conflict around the port of Zeebrugge is the least intense conflict, because the numbers of affected local residents and recreational users of the area are limited. Furthermore, the effects of the destruction of protected nature are difficult to be estimated. The required

compensation of the destroyed nature area institutionalizes the conflict: the Flemish Government is at once economically as well as environmentally motivated user. As far as the destroyed protected nature areas are concerned, this conflict will be solved internally, within the Flemish Government.

The conflict around the privatization of the airport Ostend is also less intense than the conflict around the Schipdonk canal, because the effects are difficult to be predicted.

The results from the online questionnaire show that even parties from the same coalition “camp” have very different expectations about the consequences of the different projects. Their opinions differ about the scale, importance and impact of the different projects. This might be an indicator for an unbalanced supply of information:

- Do all parties have access to comprehensive information about the planned projects in detail?
- Is the information objective and reliable?
- Did all parties work themselves through all relevant documents, containing information about the projects?
- Which are the bottlenecks?
- Which future scenario’s are predictable and realistic?

Only if all parties lead the discussion based on the same objective information, compromises or alternative solutions can be developed. The different alternatives for each project have to be analyzed in an objective and comparable way, based on the same parameters for future scenarios. (For example: Schipdonk canal vs. railroad, estuarine transport, using the existing waterway canal Ostend-Bruges-Ghent or combinations of these transport ways).

The interactions and relations between the different “camps” (social, environment and economy) are poorly developed. The formal mediating structures, providing space for different parties to talk to each other and interact are complex and not transparent for private local residents. The procedures do exist, allowing for local residents and other not-economically motivated users to bring in their personal perception and desires into the planning and decision making process. But these procedures require an active attitude and active search for information about “What is going on? What are the plans about? and How can I bring in my personal needs and concerns?”. This attitude and capacity is widely missing within the “camp” of the non-economically motivated users.

An overall conclusion is that the more visible and predictable the impact of a plan is, the more intense the environmental conflict is. The scale of the environmental impact is not necessarily related with the scale of the conflict: destroying protected nature reserves in a remote area seems to be less noticed and leads to lesser conflicts than the plan to cut down rows of trees, which dominate the landscape, are clearly visible and are an important part of landscape perception for many local residents.

All three cases are related to infrastructure and mobility and with choices for the modal split for the transport of goods (transport by road, railway and/or waterway). The privatization of the airport Ostend, the expansion of the port of Zeebrugge and the widening of the Schipdonk canal do have important impacts on the future modal split, and in this way, all cases are related to each other. But decisions about the infrastructure related modal split are made case-wise and not within the framework of an overarching mobility plan. The existing mobility plan (Flemish Government, 2009) does not contain a vision and clear objectives for the future desirable modal split, leaving the decision making process for all three cases unguided and not concerted.

Embedded in all the three projects is the infrastructural logic of improved connectivity and efficiency for reducing the cost of doing business [increased economic development], which is a short to medium term interest. From the detailed analysis of the three cases, it is discernable that this interest is in conflict with the long-term environmental benefits: benefits of the coastal nature and resources, landscape heritage and anticipated damage to the sustainability of natural eco-system and its services. The conflicts generated by these projects are aggravated by the lack of participatory approach and, specifically, the perceived lack of communication between the Flemish government and local residents. Policy, planning, design, governance and related decision-making about these infrastructural projects need to be framed within an overarching mobility plan that has a participatory approach at its core and duly takes into account the long-term environmental benefits in order to unfold a more sustainable form of development in the coastal urban environment.

6. References

- Agalev zomergem (2001). Schipdonkkanaal. <http://groenzomergem.be/system/files/dossier+schipdonk.pdf>. Zomergem.
- Allaert, G. (2008). Seine Schelde West (SSW), Infrastructuurproject met veel vraagtekens. In: *Ruimte en Planning*, year 28, no. 4, p.78-82.
- Boerenbond, BBL, Natuurpunt (2009). Achtergrondnota: Boerenbond, Natuurpunt en Bond Beter Leefmilieu zeggen neen tegen Seine Schelde West. http://www.natuurpunt.be/uploads/Vereniging/persberichten/documenten/pers_090409_nota_Seine_Schelde_west.pdf. Last accessed July 2012.
- Cadoret A. (2009). Conflict dynamics in coastal zones: a perspective using the example of Languedoc-Rousillon (France). *Journal of Coastal Conservation*, 13.
- Chandrasekharan D. (1996). Addressing Natural Resource Conflicts through Community Forestry: The Asian Perspective. Paper prepared for Session 3: 'Asia and Latin America', of the e-conference on Addressing Natural Resource Conflicts through Community Forestry, January - May, 1996. Proceedings of electronic conference on Addressing Natural Resource Conflict Through Community Forestry. Rome: Food and Agricultural Organization of the United Nations.
- Claus, I. (2003) "Duurzame ontwikkeling in de haven van Zeebrugge", Paper Maritime Science, UGent/UA, Ghent, Antwerp.
- College van burgemeester en schepenen van Zomergem (2009) "Opmerkingen bij het Plan – MER", Zomergem.
- De Kustkrant (1993). 1.500 nieuwe jobs beloofd. Issue 27 January 1993.
- Debisschop K., Hörchner K., Lyen K., Boosten G., Van Breedam A., Rome F., (2007). Businessplan Luchthaven Oostende. Vlaams Instituut voor de Logistiek (VIL), Antwerp.
- Erkend Regionaal Samenwerkingsverband (ERSV) (2008). Conges: Haven- en Regioontsluiting. 9 June 2008. www.ersv.be/download.dhtml?url=/cms_files/N-3669...pdf. Last accessed 20.05.2011.
- Europa (2011). Conservation of wild birds. http://europa.eu/legislation_summaries/environment/nature_and_biodiversity/128046_en.htm. Last accessed 20.05.2011.

- Flemish Government (2009). Minister of Public works and Mobility. www.ministerhildecrevits.be. Last accessed 20.05.2011.
- Flemish Government (2010). Extra maatregelen voor natuurcompensatie voor achterhaven Zeebrugge. Persmededeling van de Vlaamse Regering. 23 July 2010. http://www.vlaanderen.be/servlet/Satellite?c=NB_Nieuwsbericht&pagename=nieuwsberichten/NB_Nieuwsbericht/Nieuwsbericht&cid=1278906632472. Last accessed: 10 July 2012.
- Flemish Parliament (2009). Beleidsnota Mobiliteit en Openbare Werken 2009-2014. docs.vlaamsparlement.be/docs/stukken/2009-2010/g217-1.pdf. Last accessed 20.05.2011.
- Geist M.R.M (2010). Using the Delphi method to engage stakeholders: A comparison of two studies. *Evaluation and Program Planning* 33 (2010) 147–154.
- GEO-Vlaanderen (2011). GIS-loket. <http://geo-vlaanderen.gisvlaanderen.be/geo-vlaanderen/gwp/#>. Last accessed 20.05.2011.
- Gouverneurs van de Provincies Oost-Vlaanderen en West-Vlaanderen (2008). Gebiedsvisie Seine Schelde West. Gent, Brugge.
- Groen vzw (2001). De toekomst van de zeebrugse achterhaven. Persconferentie 18 April 2001. Sint-Andries, <http://users.telenet.be/a150254/Zeebrugge.html>. Last accessed 20.05.2011.
- Groen vzw Zomergem (2007). Dossier Schipdonkkanaal 16 February 2007. <http://groenzomergem.be/system/files/Dossier+Schipdonk.pdf>. Last accessed 20.05.2011.
- Groep 3 (2011). Schipdonkkanaal. <http://groep3.wikidot.com/schipdonkkanaal>. Last accessed 20.05.2011.
- Gupta U.G. and Clarke R.E (1996). *Theory and Applications of the Delphi Technique: A Bibliography (1975-1994)*. *Technological Forecasting and Social Change* 53, 185-211 (1996). Elsevier Science Inc.
- Hens L., Le X.Q. and De Munter K. (2010). Analysis of conflicts of uses of coastal resources amongst users and sectors. SECOA, VUB, Brussels.
- Het Nieuwsblad (2001). REPLO countert WILOO. Issue 25 October 2001. http://www.nieuwsblad.be/article/detail.aspx?articleid=NBRA25102001_042
- Linstone H.A. and Turoff A. (Eds) (2002). *The Delphi Method: Techniques and Applications*. ISBN 0-201-04294-0

- Ministerie van de Vlaamse Gemeenschap, departement Leefmilieu en Infrastructuur (2001). Strategisch Plan voor de Haven Brugge-Zeebrugge. Brugge.
- Ministerie van de Vlaamse Gemeenschap, Departement Leefmilieu en Infrastructuur, Administratie Wegen en Verkeer (2004). Milieueffectrapport Internationale Luchthaven Oostende – Brugge. Brussels.
- Naert F. (2007). De haven van Zeebrugge, sociaal-economisch bekeken, Gent.
- Nationale Bank van België (2010). Press release: The economic importance of the Belgian ports - Flash estimate 2009. <http://www.nbb.be/doc/TS/Enterprise/Press/2010/cp101020En.pdf>
- Natuureservaten vzw (2001). Newsletters, Press release 10 September 2001. <http://www.studiokontrast.com/nr/nieuws.html#10/09/01>. Last accessed 20.05.2011.
- Prusty S.K., Mohapatra P.K.J., and Mukherjee C.K. (2010). GOS tree (Goal–Objective–Strategy tree) approach to strategic planning using a fuzzy-Delphi process: An application to the Indian Shrimp Industry. *Technological Forecasting & Social Change* 77 (2010) 442–456.
- REPLO (2011). <http://www.replo.be>. Last accessed 20.05.2011.
- Rupesinghe K. (1995). Multi-Track Diplomacy and the Sustainable Route to Conflict Resolution. *Cultural Survival Quarterly*.
- SERV, Vlaamse Luchthaven Commissie (2006). Standpunt over de Strategische visienota m.b.t. Vlaamse Regionale Luchthavens. Brussels.
- Technum (2008). Kenningsgeving Plan MER – Het Strategisch Haveninfrastructuurproject in de Westelijke Achterhaven van Zeebrugge – SHIP. Antwerp.
- Technum (2010). Kenningsgeving Project MER – Het Strategisch Haveninfrastructuurproject in de Westelijke Achterhaven van Zeebrugge – SHIP. Antwerp.
- Van de Voorde E., Herman F., Debisschop K., Heuvelman M., Boosten G., Van Breedam A., Rome F., Meert B. (2006). De potentiële ontwikkelingsmogelijkheden van de luchthaven van Oostende op het gebied van vrachtvervoer. Vlaams Instituut voor de Logistiek (VIL), Antwerp.
- VDAB, News, 20 Augustus 2010 (20.05.2011) <http://contact.vdab.be/haven/2010/08/natuurcompensatie-uitbreiding.html>
- Vlaams Instituut voor de Logistiek (VIL) (2007). Businessplan Luchthaven Oostende, Antwerp.

Vlaamse Luchthavencommissie (2006). <http://www.vlaamseluchthavencommissie.be/vlc/>

VLM (2010). Natuurcompensaties Achterhaven van Zeebrugge. <http://www.vlm.be/lijsten/projectfiches/Pages/NatuurcompensatiesachterhavenZeebrugge.aspx>. Last accessed 20.05.2011.

Warner M. (2000). Conflict management in community-based natural resource projects: experiences from Fiji and Papua New Guinea. Working Paper, 135 edn. London: ODI, 2000.

Waterwegen & Zeekanaal (2008). Seine-Schelde-West, Resultaten van de haalbaarheidsstudie. Gent.

WES (2008). Milieubeoordeling van het plan tot uitbreiding en optimalisatie van het vormingsstation van de zeehaven Brugge Zeebrugge. Brugge.

Ahmed Z. KHAN, Xuan-Quynh LE, Torsten WIEDEMANN, Eric CORIJN, Frank CANTERS, Department of Geography, Vrije Universiteit Brussel.

email: azm.khan@asro.kuleuven.be

email: le.xuanquynh@vub.ac.be

email: eric.corijn@vub.ac.beil to

Khan, Z. Ahmed; Le, Xuan-Quynh; Wiedemann, Torsten; Corijn, Eric; Canters, Frank, "Environmental Conflicts in Coastal Urban Areas: The Belgian Case-Studies of Ostend Airport, Schipdonk Canal and Zeebrugge Harbour". In: Ahmed Z. Khan, Le Xuan Quynh, Frank Canters, Eric Corijn (ed.), *Environmental Conflicts in Coastal Urban Areas: Towards a Strategic Assessment Framework for Sustainable Development*. Cap. 3. SECOA FP7 Research Project, Vol. 4. Rome: Sapienza Università Editrice, 2013. <http://digilab-epub.uniroma1.it>. DOI: [10.13133/978-88-98533-00-8](https://doi.org/10.13133/978-88-98533-00-8). Web. 12 July 2013.

ABSTRACT: With the growing awareness of environmental sustainability issues worldwide, there has been a proliferation of responses and measures in the Flanders region of Belgium since late 1980s. While the environmental measures are proliferating, the pervasive growth based economic development pressures have not gone away, leading to the unfolding of a variety of conflicts and their further intensification. Typically the conflicts between, on the one side local residents, environmental NGO's, green parties and on the other side economic developers, enterprises and the government rise when open spaces are claimed for economic purposes and projects. Based on an inventory of a larger number of such conflicts in the Belgian coastal area, this chapter presents an in-depth analyses of three specifically selected conflict cases – privatization of Ostend airport, widening of Schipdonk canal, and inland expansion of the Zee-Brugge harbour. All the three cases are characterized by economic development interests vs. environmental protection. The conflicts are mainly triggered by the initiation of these infrastructural projects that are being imagined to unfold greater economic prosperity in the otherwise economically depressed coastal region of West Flanders province. The infrastructural logic of improved connectivity and efficiency for reducing the cost of doing business [increased economic development] is a short term interest that is in conflict with the long term environmental benefits of the natural resources and eco-system services of coastal space. Decisions about these infrastructural projects are made project-wise and not within the framework of an overarching mobility plan that has a participatory approach at its core and

duly takes into account the long-term environmental benefits, leaving the decision making process for all three cases unguided and not concerted. The conflicts are aggravated by the lack of participatory approach in these projects and, specifically, the perceived lack of communication between the Flemish government and local residents. Underpinning the detailed analyses of these three conflict cases presented in this chapter is the main argument that an in-depth understanding of the nature of these conflicts - the way they are constructed and evolved, their thematic and typological classification, their current trends and possible future impacts – is not only a prerequisite for their resolution but also for imagining alternative and more sustainable futures in the coastal urban environment.

KEYWORDS: global changes, coastal areas, environmental conflicts, Ostend Airport, Schipdonk Canal, Zeebrugge Harbour

Submitted: 13th August 2012
Accepted: 17th October 2012
Final Revision: 13th June 2013
Published: 12th July 2013

