

Green concession agreements

How can port authorities integrate environmental issues in the terminal awarding process?

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Making port management ‘green’

Environmental concerns about port activity are mounting. The process of making port management ‘green’ affects port authorities around the world in terms of safeguarding their ‘license to operate’ and increasing their economic and environmental competitiveness. In Europe, the growing green reflex is mirrored in the many green initiatives of individual ports and the coordinated actions of the wider port community, as exemplified by the Ecoports foundation (embedded in the European Sea Ports Organisation – ESPO) and the annual GreenPort conferences.

One of the most interesting fields of action for landlord port authorities relates to the inclusion of green factors when awarding terminals to private terminal operators. Land for port development is scarce, making terminal concessions to private stevedoring companies a prime task of landlord port authorities. Key issues in the process include the allocation of mechanisms used for granting seaport concessions, the determination of the concession term and concessions fees, and the inclusion of special clauses in the concession contract aimed at assuring that the terminal operator will act in the interest of the port authority and the wider community (cf. throughput guarantees).

A well-designed concession policy allows port authorities to retain some control on the organization and structure of the supply side of the port market, while optimizing the use of scarce resources such as land.

Phases in the terminal awarding process

A typical terminal awarding procedure consists of three phases, as depicted in Figure 1 (see also: [1] and [2]).

In the pre-bidding phase, the port authority makes the necessary preparations for the awarding, taking into account prevailing regulatory conditions. This includes decisions on the rules of the game, such as criteria related to the qualification and selection of candidates, and the desirable concession duration. In the awarding phase, candidates are screened, bids are evaluated and the most appropriate candidate is selected. In the post-bidding phase, a legally binding concession agreement is signed with the selected candidate and the company’s performance is monitored during the contract term. If necessary, correcting measures are taken and disputes are settled.

Making terminal awarding procedures ‘green’ requires initiatives in each of the three phases of the process. Remarkably, a recent survey performed by ITMMA and ESPO, which included 43 recent terminal awarding cases across Europe, showed that environmental issues today do not play an important role in terminal awarding processes across European ports.

Green actions in the three phases

When deciding what site to award, port authorities could more explicitly look at the environmental quality of the port site. Brownfields might be more expensive to redevelop, but often

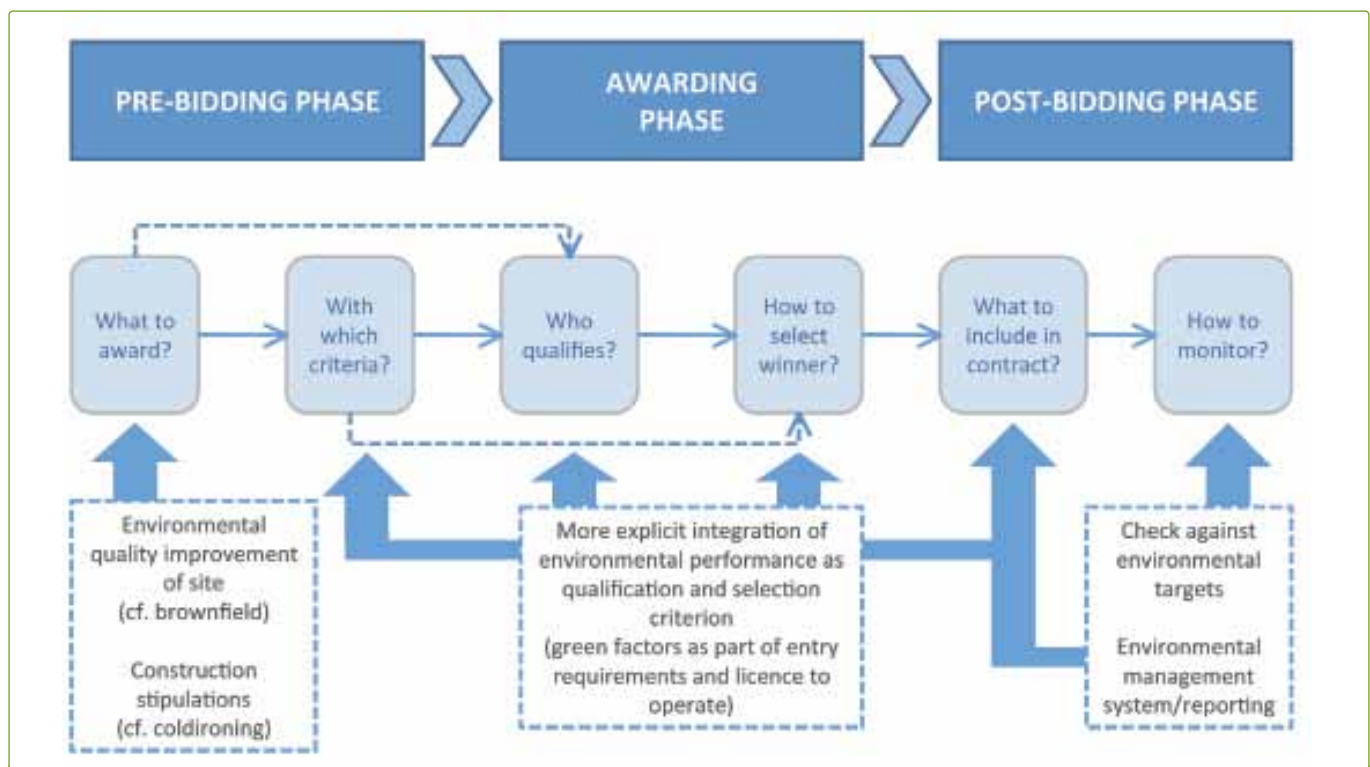


Figure 1. How environmental targets can be integrated when awarding seaport terminal contracts.

lead to a higher spatial quality and regeneration of older port sites. Port authorities could also include more stringent construction guidelines for port infrastructure and superstructure. Such measures could include the use of a minimum percentage of green energy or the installation of coldironing facilities.

In the awarding phase, port authorities often include a qualification stage in which the number of candidates is narrowed down. Candidates are qualified based on minimum requirements related to their financial strength and relevant experience in operating facilities for similar cargo in the same or other ports.

Environmental performance can constitute a new additional element in this qualification phase. By doing so, possible candidates are not only rewarded for their market scale and financial potential, but also for having taken initiatives previously to develop a green policy at other terminals in their portfolio. In about 70 percent of today's European terminal projects, candidates have to present studies of environmental and territorial impact, covering aspects such as the impact of the terminal operations on the environment and the alternatives to eliminate, reduce or mitigate certain effects. While this proves that port authorities are very much interested in the environmental strategy of candidates, it remains remarkable that environmental criteria are rarely included in the final selection round. There is scope here to more explicitly integrate environmental performance into the selection process, next to more traditional criteria such as throughput expectations, financial performance, the price bid and socio-economic impacts in terms of value-added, created and employment effects.

Port authorities should also consider the inclusion of green elements in the post-bidding phase. Environmental clauses appear in 85 percent of all recent terminal contracts. In most cases, however, the clauses simply stipulate that the terminal operator will have to comply with local, national and supranational environmental legislation. In about 30 percent of these cases, the environmental clauses refer to the compulsory use of some sort of environmental management reporting system, while stipulations on emission levels are included in 18 percent of the contracts. About 9 percent of the contracts refer to specific technical equipment being used to limit emissions. About one fourth of all contracts combine several of the above environmental clauses. Occasionally, ports include clauses on existing or future contamination of the terminal site.

Looking at the multi-year trend, not on a year-to-year basis, is the best way to evaluate the environmental performance of a terminal.

Towards an environment-friendly modal split: the carrot or the stick?

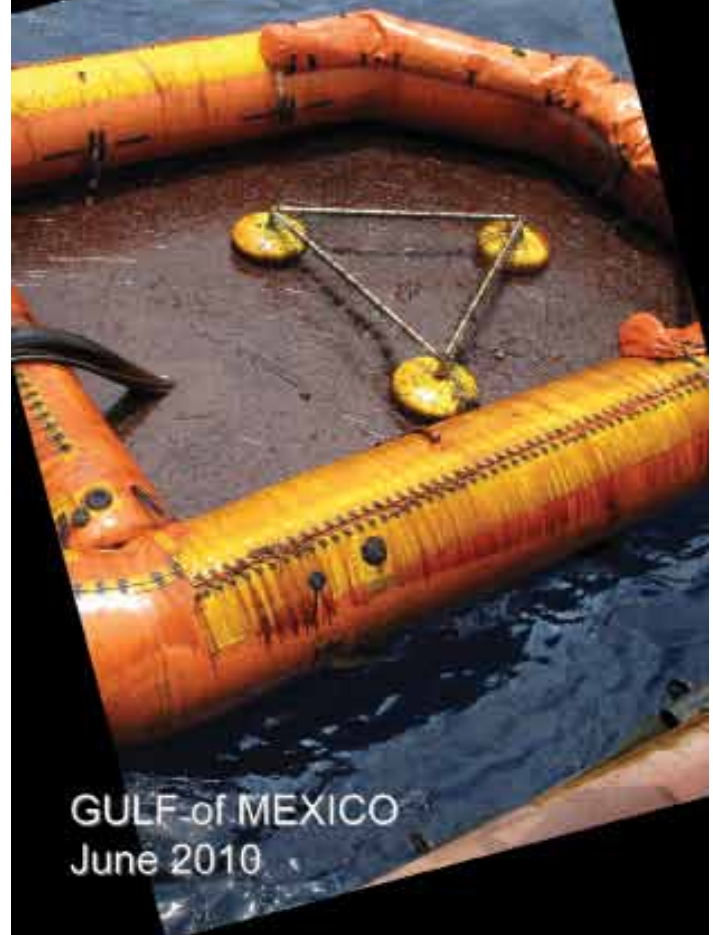
A small number of recent terminal contracts include modal split specifications, particularly in a container terminal context. In about half of these cases, the contract elaborates on some technical specifications and compulsory investments to be made by the terminal operator in hinterland transport infrastructures on the terminal site. In only 21 percent of these cases, the modal split clauses explicitly impose a specific modal split on the terminal operator to be reached by a certain year (for example: 40 percent road, 40 percent barge and shortsea, and 20 percent rail by 2015).

The modal split target is often formulated as a soft objective (an intention). Soft targets are, however, best kept outside the contractual setting, as they cannot be legally imposed on the terminal operator. The port authority can encourage terminal operators to reach the soft targets by positive pricing or awarding systems (the 'carrot' approach).

The setting of hard targets in the concession agreement implies a 'stick' approach, with binding clauses and enforcement (penalties in case of non-compliance). In following such a stick approach, port authorities often face the problem of posing credible threats.

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For example, terminal operators who are confronted with ‘hard’ modal split clauses will argue that the distribution of cargo over the various inland transport modes is largely affected by exogenous factors. These factors might include, for instance, the supply chain practices of their customers, the pricing and quality of rail and barge services and the infrastructure policy outside the port area (by government).

Terminal operators can, however, positively influence the modal split on their terminal through pricing (for instance a dwell time fee system or pricing of moves to inland transport modes), actions to increase the transparency of information flows (which makes cargo bundling towards rail and barge easier) and extended gate solutions in the hinterland (for instance by setting up satellite terminals in the hinterland).

Low hanging fruits?

Environmental factors are not yet widespread criteria in bidding procedures. Port authorities should (continue to) have the possibility to work out terminal awarding procedures, taking into

account environmental objectives and the need for a sustainable and highly competitive port context.

While each port is unique, there is some scope for joint action and convergence among seaports with respect to these aspects. Port authorities and terminal operators are only able to fully benefit from green concession procedure initiatives if these actions are embedded in a chain approach towards the environment (ship, port, terminal, warehouse, inland transport, and so on). Green concession agreements miss their effect when treated in isolation.

REFERENCES

- [1] Notteboom, T., (2007): “Concession agreements as port governance tools”, *Research in Transportation Economics*, 17, p. 449-467.
- [2] Theys, C., Notteboom, T., Pallis, A., De Langen, P., (2010): “The economics behind the awarding of terminals in seaports: towards a research agenda”, *Research in Transportation Economics*, 27(1), p. 37-50.

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ITMMA (Institute of Transport and Maritime Management Antwerp) of the University of Antwerp is one of the world's premier suppliers of highly specialized academic and practice-based maritime and logistics education and research. ITMMA's activities include M.Sc. programs, a Ph.D. program, short-term courses and tailor-made post-experience programs, research and publications and trend-setting events and conferences.

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