

AMENITY CONFLICTS BETWEEN URBAN PORT FACILITIES AND COMMUNITIES IN AUSTRALIA

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ABSTRACT

Selsky and Memon (1997) commented that ports are part of a zone “where there is considerable pressure from diverse stakeholders” due to technological, economic, political and environmental forces from stakeholders as well as from “the wider context management of urban ports.” They referred to three forms of community conflicts around urban ports: locational conflicts; failures of corporate social responsibility; and inadequate co-management arrangements. The author analyzed the sources of conflict identified in national surveys of Australian ports from 1999 to 2010 to evaluate the significance of these matters as possible interferences in what Memon and Selsky describe as the “amenity commons.” An analysis of the Australian Report Cards from 1999-2010 strongly indicates that a direct correlation exists between the economic utility and efficient management of ports and the resulting impact those processes have on their urban neighborhoods and extended communities. The salient discovery is that the issues raised by Menon and Selsky and verified in the Australian Infrastructure Reports mandate the need for improved strategic planning for a reasonable solution for ports and their surrounding communities in the second decade of the 21st century.

JEL: O11, O18, O33, O43, O44, Q56

KEYWORDS: Port Management Urban/port Infrastructure Growth Issues Port/local Community Conflicts Economic and Environmental Sustainability Challenges

INTRODUCTION

The purpose of this study was to survey the experience of Australian ports and their adjacent urban communities over the period 1999-2010 to categorize the issues that have affected the amenity commons and the degree to which *interspecific competition* has ensued. The source of data for this section is the series of *Infrastructure Report Cards* produced by Engineers Australia from 1999 to 2010. The portals to and transshipment points from Australia’s rich natural resources zones are via its ports. As the Australian economy improved in relationship to the take off period of the Chinese and Indian economies so has the strain on its ports to handle efficiently the egress of exports and ingress of imports. Simultaneous with the demands on the ports for increasing their capacity and efficiency are the natural by-products of commodity/industrial enterprise, pollution of all sorts, congestion, potential for biological contamination and human terrorism and the economic stress of competition for valuable real estate. Selsky and Memon identified these tensions as *amenities commons conflicts* in 1996-’97. Data from the Australian Report Cards from 1999-2010 strongly indicates that a direct correlation exists between the economic utility and efficient management of ports and the resulting impact those processes have on their urban neighborhoods and extended communities. The resolution of these common conflicts was articulated by Selsky and Memon in 1997 (holistic approach) and the 2010 Australian Infrastructure Report Card (harmonize).

LITERATURE REVIEW

The significance and value of worldwide maritime trade along with the associated shipping industry and port facilities infrastructure is colossal. It is estimated that 90% of world commerce is carried by commercial vessels (Marisec, 2011) and the global maritime transportation industry generated an estimated annual income of (USD) \$380 billion (Korinek & Sourdin, 2009). According to the World

Bank, the total value of the international shipping industry expressed in terms of GDP would rank it 25th in the world, slightly ahead of Saudi Arabia (World Bank, 2009).

Australia's economic development and concomitant regional geopolitical influence is dependent on its port facilities as a base to export its diverse portfolio of strategic raw materials, not to mention the volume of goods imported by Australia. Australia is the home of nearly six (5%) of the world's largest ports in terms of freight tons handled (Hedland #19, Dampier #26, Newcastle #39, Hay Point, #46, Gladstone #52, Brisbane #122) and 2 (1.6%) of the world's top container ports (Melbourne #51 and Sydney Ports #67) (American Association of Port Authorities, 2011). These statistics shed light on the economic, social and domestic political importance that port facilities have on Australia. However, lost in the macro analysis of global maritime trade and the value of port infrastructure are the micro frictions described by Selsky and Memon (1997) as *amenity commons conflicts*.

The evolution of contemporary port locations in virtually any country can be traced to sites with access to navigable waters. At these locations, commerce and communications with others could be easily and efficiently conducted. Generally, ports were created first followed by settlements around them and eventually expansion of the urban port communities was facilitated by the economic activity tied directly to or spun off by port business. Economists refer to the advantage that the local economy derives from the geographic location of a port as an endowed asset/advantage. Australia's early port settlements became the basis of and continue to account for the greatest population concentrations along its coasts; particularly the three largest population centers Sydney Brisbane, Melbourne and Brisbane that are the homes of three of the largest port facilities in Australia.

During the *take off* period of many countries during the modern industrial era, the consideration of quality of life issues were rarely if ever considered. The major metric of progress was economic growth. The cost of economic progress in terms of the cost of degradation of the environment was not considered as salient. However, recently threats to human health due to industrial pollution, threat of environmental disasters such as oil spills and ship wrecks may have on sensitive environmental assets such as the Great Barrier Reef, the release of hazardous materials, storage of potentially lethal cargoes and threats of variety of forms of terrorism have become common community concerns.

One of the more contemporary studies conducted of Australia's coastal zone was a major investigation done from 1991-1993 by the Resource Assessment Commission and another study, the Commonwealth Coastal Policy, 1995. Both reports focused on the impact of shipping based pollution (ship-sourced pollution and ballast water issues) and little attention was given to the difficulties caused by port operations (Bateman, 1996). Another paper, The Australian and New Zealand Environment and Conservation Council (ANZECC) Discussion Paper on Maritime Accidents and Pollution articulated one of the key reasons for the development and existence of what would be called *amenity commons conflicts* as the lack of an aligned approach to deal with overarching issues posed by the maritime industry and other interests. Bateman (1996) observed, "There are no institutions or mechanisms in place at present in Australia to resolve differences of this nature or to define national priorities with national maritime interests and activities" (p. 230). Selsky and Memon (1997) placed the issues cited in the Resource Assessment Commission, the Commonwealth Coastal Policy and the Australian and New Zealand Environment and Conservation Council (ANZECC) Discussion Paper on Maritime Accidents and Pollution and increasing trend toward the privatization of port management in a new context. Unlike the official reports, which Bateman claimed, only outlined factors that contributed to conflict between ports, the maritime industry and urban communities but did not propose a methodology to mitigate the issues, Selsky and Memon asserted that a *holistic* approach was needed. To accomplish that objective Selsky and Memon created several useful definitions to guide an analysis. First, they characterized ports as "part of a zone where there is considerable pressure from diverse stakeholders" (p. 259). Second, the authors maintained, "many community conflicts over development are concerned with amenity values such as

quiet, ambiance, scenic views and lack of congestion” (p. 261). Third, they defined the core port/community disagreements as:

Locational conflicts, that is, opposition by some interests in a community to corporate development initiatives. Alternatively, such conflicts may be seen as failures of corporate social responsibility, in which the dominant corporate actor does not fulfil social expectations placed on it. Finally such conflicts may be seen as the result of inadequate comanagement arrangements in a common pool resource (Memon & Selsky, 1998, p. 589).

Finally, Selsky and Memon (1997) defined the underlying source of disagreement of common pool co-management as *amenity commons conflicts*.

From the perspective of commons co-management, amenity values may be considered common-pool resources, and conflicts over such resources indicate inadequate institutional arrangements for managing them. The eruption of conflicts over disamenities can make transparent that residents assume property rights to amenity values in their community. The reason for the conflicts is that the residents feel those rights have been violated. We may call this bundle of de facto rights an amenity commons (p. 261).

In 1998, Selsky and Memon released their case study analysis of Otago Harbour in New Zealand (*Institutional Design for the Comanagement of an Urban Harbor in New Zealand*) that applied their innovative approach to revealing *amenity commons conflicts* and proposing solutions. Their case study of Otago Harbour was an innovative approach to thoroughly examining the historical divergence between the port company and the local community. The case study not only examined the causes of *amenity commons conflicts* but also offered a blueprint for the resolution of these negative interfaces for other port communities to follow.

METHODOLOGY

The data used by the Institution of Engineers, Australia (IEAust) to evaluate the condition of Australia’s key infrastructure segments from 1999 to 2010 was the basis of this study. Data was obtained from research and interviews with appropriate community and business groups and publicly available information. The methodology employed by the Institution of Engineers, Australia assesses ports as the equivalent of a structure (bridge, highway) or system (water/waste water); however, inevitably the reports briefly and in general terms mention *amenity commons conflicts*.

In the 1999, Infrastructure Report the IEAust stated that the results of the Infrastructure Report were comparable to an American project completed in 1998 in which grades (A-F) were used to articulate the condition of America’s infrastructure. By following the American grading system, the IEAust was able to provide a consistent context for the evaluation of Australia’s infrastructure. The methodology used to evaluate the data was a mixed method approach. The assessments relied on publicly available information and concentrated on strategic issues, augmented by quantitative performance measures if they were easily obtainable. After the data was accumulated and analyzed, qualitative grades were issued. The grades of A (very good) to F (inadequate) signified an average over a number of criteria, including adequacy, need, funding, condition, performance, and social and environmental issues.

RESULTS AND DISCUSSIONS

The Institution of Engineers, Australia (IEAust), the largest professional body representing Australia’s engineers, responded to a variety of high profile infrastructure failures in Australia by issuing periodic reports on the status of Australia’s infrastructure (see Table 1 for summary of *Australian Infrastructure Report Cards*).

Table 1: Summary of Australian Infrastructure Report Cards

Year	Location	Conflict/Difficulty	Rating
Australian IR 1999	National	No evaluation of ports in 1999 Report.	N/A
Australian IR 2001	National	Increasing urban encroachment around port sites is limiting their expansion capacity and affecting residential amenity. Strong need for integrated planning in relation to maintaining buffers around ports and controlling the urban development of land adjoining ports.	B
New South Wales 2003	Regional	Ports not included in report.	
Queensland IR 2004	Regional	Residential development and port operations with noise and lighting tend not to co-exist comfortably.	B-
Australian IR 2005	National	Urban encroachment. Co-ordination with land and air transport systems. Channel deepening is required for the Port of Melbourne to meet future growth in the size of ships. Current and continuing boom in the minerals sector in W. Australia, particularly those industries at the Burrup Peninsula will necessitate continued upgrading and provision of facilities.	C+
Aus. Cap. Territories IR 2005	Regional	No evaluation of ports in Infrastructure Report Card.	N/A
Northern Territories IR 2005	Regional	Barge landings and port facilities all appear to be of an adequate standard for the Northern Territories. Urban encroachment issues in several ports noted.	B+
South Australia IR 2005	Regional	Ports not included in report.	N/A
Tasmanian IR 2005	Regional	Urban encroachment and protection of land zonings and access corridors.	B
Victorian IR 2005	Regional	For all ports, urban encroachment and protection of buffer zones and access corridors.	C
Western Aus. IR 2005	Regional	For all ports, urban encroachment and protection of buffer zones and access corridors.	B-
Australia IR 2010	National	The need to consider future port requirements when making nearby urban development decisions is essential.	B-

Table 1 is a summary of the key findings from the Institution of Engineers, Australia (IEAust) reports that evaluated the condition of Australia's key infrastructure segments from 1999 to 2010. The methodology used to evaluate the data was a mixed method approach. The IEAust evaluations relied on publicly available information supplemented by quantitative performance measures if they were easily obtainable. After the data was analyzed, qualitative grades were A (very good) to F (inadequate) issued. The appearance of urban/port facility conflict first appeared in 2001 and became a significant component of the national (and most regional) IEAust Infrastructure Reports thereafter.

1999 Report: Their first report issued in 1999 examined and graded (A = excellent, F= inadequate) the following infrastructure sectors: national roads, state roads, local roads, bridges, railways, water, sewerage, management and planning and benchmarking (Institution of Engineers, Australia (1999). Curiously, ports were not analyzed or assessed in the IEAust's first infrastructure report.

2001 Report: The IEAust's 2001 Infrastructure Report Card expanded the infrastructure sectors that were graded using the same A – F scale as in 1999. The sectors that were analyzed expanded from 9 in 1999 to 13. Seven new sectors were added: Electricity, Airports, Gas, Telecommunications, Ports, and Storm Water. Deleted were management, planning, and benchmarking (Institution of Engineers, Australia, 2001). In this report, the highest ranked infrastructure sectors were Ports (B), Telecommunications (B) and Airports (B). A B grade was interpreted to mean that “Minor changes required in one or more of the infrastructure condition, committed investment, regulatory regime and planning processes to enable infrastructure to be fit for its current and anticipated purpose” (IEAust, 2001 Infrastructure Report Card, p. 98). The chief issue articulated in the summary portion of the 2001, Infrastructure Report Card was “Increasing urban encroachment around port sites is limiting their expansion capacity and affecting residential amenity. Overall the infrastructure is currently rated as acceptable to very good overall” (p. 4). The IEAust concluded their analysis with the following recommendation:

Better integration of intermodal transport is required to remove bottlenecks and improve the efficiency of freight movement from wharf to road, rail and air networks. There is a strong need for integrated planning in relation to maintaining buffers around ports and controlling the urban development of previous port owned or port related lands. This urbanisation creates many of the community problems facing ports. Whilst this is particularly pertinent in capital cities, it is also becoming an increasingly important issue in regional ports and new remote area ports.

Further work on developing suitable pricing and investment criteria is necessary, in the absence of competitive market forces, to ensure sound investment; dividend and pricing decisions are made by port corporations and their owners (p. 39).

The 2001 Infrastructure Report was a seminal and sobering statement of the existence (to use the biological terms) of the existence of a *mutualistic relationship* and *interspecific competition* between ports and their urban hosts. A *mutualistic relationship* is characterized by a two-way interface in which each party derives value from the other. While the connection between the economic benefits spun off by a vibrant port to its surrounding urban host is obvious, the 2005 Report Card suggests the existence of a parallel and potentially harmful rivalry between ports and their urban communities, *interspecific competition*. The nature and outcome of such a rivalry is both the ports and bordering urban communities, experience reduced benefits due mutual competition for the same resources (land, air, hours of operation, and the other factors referred to by Selsky and Memon and the IEAust as amenities). While some may assert that *interspecific competition* is the price to be paid for economic opportunity, the IEAust 2005 Report appears to have assessed the health of the ports as economic infrastructure assets while simultaneously balancing the advantages of the ports with the twin costs of the deterioration of the quality of *urban commons amenities* and reconciling the *interspecific competition* due to alterations in port management and co-management issues with the local government.

2005 Report: The grade assigned by the IEAust to the state of Australian ports in the 2005 Australian Infrastructure Report Card declined from a B (good) in 2001 to a C+ (adequate) in 2005. The main concern and reason for the decay in the evaluation was due to “urban encroachment, which limits a port’s ability to expand, as well as co-ordination with land and air transport systems” (p. 6). Other concerns cited were channel deepening for the ports of Melbourne and Fremantle and concerns with the process by which investments were made by port management to secure guaranteed economic returns, and the lengthy process to secure permits for strategic developments (p. 7).

Taken at face value, the 2005 Report Card attributed the potential curtailment of Australia’s economic growth to *urban encroachment* (2005 Report Card) rather than continuing the balanced theme noted balancing growth with *residential amenity* (2001 Report Card) underlines the inherent *interspecific competition* when commerce and community interests cohabitate. The only mention relating to urban amenities was alluded to in the Sustainability section. The 2005 Report Card divided sustainability into environmental, social and economic. Social and economic sustainability were defined as: outcomes includes reducing commuter times, increasing road safety, improving air quality and providing access to broadband communication to all citizens. Economic sustainability means ensuring that we have taxation and regulatory systems that promote new private sector investment in all infrastructure capable of generating adequate returns on investment. Most infrastructure organisations now incorporate sustainability objectives into their plans. (pp. 6-7) The 2005 Report Card advocates firmly for the economic needs of ports rather than a balanced approach noted in the 2001 Report Card. Economic pressures appear to be the primary motivation given Australia’s role in fueling raw materials into the surging Chinese and Indian economies during this period. Therefore, the balance between development of port infrastructure and urban amenities shifted in favor of port management.

2010 Report: Ports received a higher grade (B-) in the 2010 Australian Infrastructure Report Card than the 2005 report. While the half grade increase was still below the 1999 Report Card grade, progress was noted in several areas. The 2010 Report Card also provided more detailed information about individual ports than previous studies. From a strategic perspective, the 2010 Report Card made several important recommendations to reduce *interspecific competition* between economic interests and local governments specifically:

*Harmonise infrastructure planning and regulation through improved cooperation and collaboration between all levels of government, business and the community.
Establish independent planning infrastructure advisory groups to provide advice on infrastructure priorities and provide infrastructure planning and funding advice. (iii)*

The overarching issue discussed in the 2010 Report Card regarding ports centered on “meeting future container growth...which could only...be accommodated by developments underway at many ports that are providing additional stevedoring capacity and infrastructure upgrades” (p. 25). The problem with this growth for the surrounding urban areas is “more congestion, delays and pollution as a result of the huge traffic movements and this will be untenable from the perspective of the exporters and importers, and the community” (p. 26). The 2010 Report Card altered its focus regarding the *urban encroachment/urban amenities* issue from *interspecific competition* (2005) to *mutualistic relationship* (2010). The need for investment in Australia’s ports to expand and maximize their capacity and efficiency was apparent and urgent; however, the IEAust opined that:

These projects need to be funded and implemented to enable ports to cope with future growth in an economic, social and environmentally sustainable fashion. Integrating land use decisions with port development is a major problem for many major ports. Ports require large amounts of land and generate significant road and rail traffic. Ensuring compatible land use around ports is challenging due to the typically high value of land around ports. The need to consider future port requirements when making nearby urban development decisions is essential. Local governments need to consider the port’s future requirements and ports need to better contribute to local and regional planning. Urban encroachment and other developments should not prevent the efficient functioning of the port. (p. 26)

In sum, the recommendations of the 2010 Report Card summarized the key issues noted by Selsky and Memon (1997). Table 2 depicts Selsky and Memon definitions of issues that led to *amenity commons conflicts* and the major problems in Australian ports and their urban neighbors that are contributing to infrastructure weaknesses resulting in the sub-optimization of the Australian economy.

Table 2: Comparison of Selsky and Memon Definitions and 2010 Report Card Recommendations

Definition	Selsky & Memon	2010 Report Card
Mitigation	Holistic approach to solve inadequate co-management arrangements	Harmonize planning and regulation via improved collaboration between all levels of govt., business and community
Ports	Zone of considerable pressure from diverse stakeholders	Vital component of economic infrastructure
Nature of Conflict	Amenity values	Urban encroachment and development should not prevent efficient functioning of port
Disagreements and Consequences	Locational conflicts due to corporate development initiatives	Congestion, delays and pollution

Table 2 compares Selsky and Memon’s (1997) definitions of amenities commons conflicts and connects them with the most recent IEAust Infrastructure Report (2010) to show their practical application. It is clear that theory provided a rigorous predictor of outcomes indicating a growing debate between quality of life and economic development issues.

CONCLUSION

The purpose of this paper was to analyze the sources of conflict identified in a national survey of Australian ports from 1999 to 2010, which includes the expansion of port infrastructure issues; residential encroachment and environmental sustainability issues; and to evaluate the significance of these matters as possible interference in what Memon and Selsky describe as the "amenity commons." The source of data for the research was a series of *Infrastructure Report Cards* produced by Engineers Australia from 1999 to 2010. An analysis of the Australian Report Cards from 1999-2010 strongly indicates that a direct correlation exists between the economic utility and efficient management of ports and the resulting impact those processes have on their urban neighborhoods and extended communities. The resolution of these common conflicts was articulated by Selsky and Memon in 1997 (holistic approach) and the 2010 Australian Infrastructure Report Card (harmonize). The salient discovery is that the issues raised by Menon and Selsky and verified in the Australian Infrastructure Reports mandate the need for improved

strategic planning for a reasonable solution for ports and their surrounding communities in the second decade of the 21st century.

There were several limitations to this research. The issues explored by Memon and Selsky extend beyond the scope of this paper and would include other types of “port” facilities, most evident are airports. Whenever the creation of or expansion of a “port” facility occurs, the economic considerations generally emerge as the primary motivating force for action. Therefore a need exists for communities to create and engage in long-term planning to avoid the inevitable consequences of the “build it and they will come...now what are we to do” mind model that currently plagues nearly every urban major port facility. Additionally as governments around the world continue to spin off public infrastructure to the private sector, the inevitable cleavage between economic asset maximization and quality of life issues for the surrounding community may continue to widen. A need exists to harmonize the symbiotic relationship between the goals of two equal and seemingly contradictory parties.

Further research is needed to determine how other countries with a robust maritime industry deal with amenities commons issues. One suggestion is seek out how port facility strategic planning includes key stakeholders into the process. A model-building template may be another technique to research and/or create to allow a reasonable state of equilibrium to exist considering the substantial amount of public funds needed to operate a contemporary port. Incorporating the long-term view regarding port planning/community development is especially vital to developing countries, as the actions taken to stimulate their economies via global trade will inevitably have an impact on the communities that emerge to support the ports.

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ACKNOWLEDGEMENT

The author greatly acknowledges the inspiration and guidance of Dr. Rae Weston, Executive Director, Arq Indigo Research and Development and Visiting Professor Australian Centre for Integrated Freight Systems Management for the content and outcomes of this paper.

BIOGRAPHY

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