New Zealand’s Port and Harbour Marine Safety Code
A CASE STUDY IN CO-REGULATION

The inaugural annual national forum on the 2016 New Zealand Port and Harbour Marine Safety Code took place in July 2017 in Wellington. The 2016 code replaced a code originally put in place in 2004. Participants in the forum included the 2016 code partners: port companies, regional councils/unitary authorities, Maritime New Zealand, as well as maritime industry representatives, and other government agencies with an interest in maritime safety. The forum represented an important waypoint in the journey from the development, implementation and review of the 2004 code, to the development and implementation of the 2016 code as a key part of the regulatory system that seeks to manage port and harbour risks.

The 2004 code was put in place following a series of shipping incidents in 2002–03, including a serious incident in the Gisborne port involving the Jody F Millennium. That ship grounded and the subsequent investigation highlighted the need for improved regulatory arrangements to manage risks in New Zealand’s ports and harbours (Ministry of Transport, 2007, p.7). While the 2004 code was well intentioned and created some improvement in the safety management culture in New Zealand’s ports and harbours, over time concerns emerged about its relevance, effectiveness and efficiency as a way of managing successfully the risks it was intended to deal with.

These concerns were addressed by establishing the 2016 code as part of a co-regulatory mechanism which is defined by a memorandum of understanding (MoU) (Maritime New Zealand, 2017a) signed by representatives of port companies, councils and Maritime New Zealand. While not legally binding, the MoU commits the parties to principles of tripartite joint ownership of the 2016 code, voluntary adoption of mutually agreed standards, collaboration, commitment of human resources to support delivery of an agreed work plan, information sharing, and joint funding of a secretariat. The 2016 code establishes clear responsibilities and accountabilities
Box 1: History and role of pilots and pilotage

In its article ‘History of maritime pilots’, the French maritime pilots’ federation notes that pilots have a long maritime history, starting around the time the exchange of goods began in the Mediterranean basin, and reference to the term pilot (as a guide of the ship) appeared in Ezekiel’s book in the 6th century BC (Fédération Française des Pilotes Maritimes, 2017). The article notes that the ancestor of the maritime pilot can also be found in the travel literature, in a book called Periplus of Erythraean Sea, written in the 1st century AD. Fast forward to the 17th century and it is noted that ‘in Europe, since the beginning of the 17th century, the pilotage is regulated in all the countries by national laws, called “Pilotage Acts”, and by local regulations of ports, fixing the professional status of the pilots in each country.’

In New Zealand, in 1842 a Harbour Regulations Ordinance was issued, divided into four parts: pilots and pilotage; quarantine; harbour regulations; and penalties. The modern version of this ordinance is the Maritime Rules, part 90: pilotage, the objective of which is to maintain the contribution of pilotage to the safety of navigation, the protection of the marine environment and the efficiency of seaborne commerce, set minimum national standards while enabling port-specific risks to be addressed, provide a licensing regime for pilots and pilotage-exempt masters within the maritime document provisions of the Maritime Transport Act 1994, recognise and support industry best practice, and ensure the provision of pilotage services.

Co-regulation

Referring to co-regulation as a mechanism is consistent with its position as part of a taxonomy of the available forms of regulation as discussed by Freiberg (2010); and it reflects the generally understood description of co-regulation as involving industry and government (the regulator) collaborating to develop and administer arrangements that address an area of risk, with those arrangements accompanied by a ‘legislative backstop’, as discussed by Compliance Experts (n.d.) and the Ministry of Consumer Affairs (1997). Co-regulation sits on a spectrum of regulatory mechanisms which goes from full government regulation, through co-regulation, to self-regulation, with each involving more or less government intervention, as set out by Allen+Clarke (2012). In essence co-regulation has features of both government regulation and self-regulation.

Within each mechanism there is also a spectrum of ‘levels’ of government intervention. For example, the gas industry in New Zealand is regulated through a co-regulatory mechanism. That mechanism is established through legislation. The body responsible for its implementation (the Gas Industry Company Limited) is a formally constituted ‘industry body’ under the terms of the Gas Act 1992. However, the port and harbour safety co-regulatory mechanism is an entirely voluntary arrangement which involves government (both central and local) and industry establishing an MoU, developing a code, and putting in place an implementation body and process. This mechanism operates in addition to core legal requirements relating to safety and environmental protection in the port and harbour environment. Effectively, the code adds value by providing guidance and support to parties with accountabilities and responsibilities under the law.

Why ports and harbours need to be regulated

In her keynote speech to the inaugural national forum, Belinda Vernon, deputy chair of the Maritime New Zealand Authority, said:

New Zealand’s economy relies on the safe operation of our ports and harbours. With more than 99% of exports and imports by volume moving through our ports, safety of shipping in New Zealand ports and harbours is essential. It is important not only economically but also in terms of potential risk to life, property and environment from a serious shipping accident.

Weather events, larger vessels, more cruise ships, changing technology and conflicts between commercial and recreational use, all contribute to the changing marine operating environment, creating challenges and opportunities. Managing the risks associated with these is paramount. (Vernon, 2017)

While this was a statement related to the 2016 code, it describes well the nature of activity and risks associated with ports and harbours. This does not in itself mean that regulation is required to manage those risks.

which operate in addition to the core regulatory framework that underpins safety in the port and harbour environment. The MoU is clear that there is no constraint on the ability of councils or Maritime New Zealand carrying out their regulatory functions.

This article is a case study of the journey that led to the forum. It introduces co-regulation as a regulatory mechanism, canvasses why ports and harbours need to be regulated and identifies the key players in the regulatory system. It describes the journey to the development of a co-regulatory approach in which there is active acceptance of shared accountability for delivering agreed outcomes. It concludes with reference to the key design features of the co-regulatory mechanism and views of its effectiveness in the context of good regulatory practice.

In addition to being a case study of the journey to co-regulation, it is a story of central and local government agencies working together effectively to address risks of national significance.
In plain terms, the rationale for regulation is that the risks won’t be managed effectively if users are left to their own devices. The regulatory impact statement supporting changes to port and harbour safety regulation in 2013 (Ministry of Transport 2008) referred to the series of incidents that occurred in 2002-03. Those incidents revealed a pattern of failures in port safety governance and operational procedures (not only confined to ports where incidents had occurred) that supported the need for regulation.

Key players in the port and harbour regulatory system

Port companies, councils and Maritime New Zealand are all involved directly and/or indirectly in the regulatory system that applies to ports and harbours. Two of the primary means of addressing risks in the port and harbour environment are through the functions of pilots and harbourmasters, who are employed by port companies and councils respectively. Maritime New Zealand has regulatory oversight of safety and environmental matters, and pilotage and harbourmaster functions, through the Maritime Transport Act 1994.

Port companies came into being as a result of the Port Companies Act 1988, the purpose of which is to promote and improve efficiency, economy and performance in the management and operation of the commercial aspects of ports. This gives a clue to their primary focus being to operate commercially, not to operate as regulators. Port companies are generally owned (in full or in part) by councils, but operate at arm’s length. Port companies employ, or contract, pilots to assist in guiding ships into harbours. Pilots are service providers, not regulators. Box 1 sets out briefly the history and role of pilots.

Councils’ responsibilities are set out in the Maritime Transport Act 1994 (following amendment in 2013) and include harbour navigation and safety, oil spills and other issues related to marine pollution. They are effectively the ‘local’ regulators in the port and harbour environment, with the ability to set by-laws to manage a prescribed set of local navigation safety issues. Their responsibilities in this area are typically met through employing harbourmasters (or contracting the provision of harbourmaster services). While harbourmasters provide services, they are regulators. Box 2 sets out briefly the history and role of harbourmasters.

In some cases harbourmaster services are provided by port company employees. For example, in Nelson the harbourmaster is also the marine operations manager for Port Nelson, and a pilot in that port and region. In Taranaki a similar situation exists, with the harbourmaster function being undertaken by the port marine operations manager. As these combined functions may be perceived as involving conflicts of interest, arrangements are in place involving deputy harbourmasters to ensure that functionally independent decision making occurs where necessary.

Maritime New Zealand’s responsibilities include taking action in situations where port management poses a significant risk to the safety of shipping and, potentially, to the marine environment. This is done through legally enforceable interventions, should such action prove necessary. Maritime New Zealand also employs the harbourmaster for the port at Taharoa, which is an offshore terminal used for loading iron sands onto purpose-built vessels. The regulatory system in respect to ports and harbours is somewhat complex. Given the integrated nature of the roles, responsibilities and accountabilities, it is apparent that clarity between parties, supported by good communication and cooperation, is necessary for the system to work effectively. This provides fertile ground for a well-designed co-regulatory mechanism.

The journey to a co-regulatory approach

The journey towards today’s co-regulatory approach began with the Transport Accident Investigation Commission and the Maritime Safety Authority (as of 2005.

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Box 2: History and role of harbourmasters

According to Captain Rinze K. Mast, writing in Port Technology International (n.d.):

The office of harbour master can be traced back to 317 BC at least. It was in that year that a Cyprian businessman, with the name of Zeno of Citium (c.336-c.264 BC), encountered a storm off the port of Athens, Greece. As at that time Zeno could not avail himself of the services of an Athenian Harbour Coordination Centre he was shipwrecked near the port entrance and was rescued by a bookseller, who also held the post of harbour master and bath-superintendent. … In more recent years the harbour master’s office can be traced back to The Netherlands, Middelburg 1513 and Rotterdam 1554, the United Kingdom, Bristol 1669, and Belgian Ports about 1800. (Mast, n.d.)

Closer to home, Maritime New Zealand’s history timeline on its website records that in 1841 Auckland’s first harbourmaster was appointed.

While the legislative underpinnings for harbourmaster functions referred to above are not clear, today in New Zealand the role of the harbourmaster is defined by reference to the functions and powers set out in the Maritime Transport Act 1994, sections 33E and 33F (as amended in 2013). In summary, a harbourmaster’s purpose is to ensure maritime safety in relation to ports, harbours or waters for which he or she has been appointed as a harbourmaster by a regional council. The harbourmaster has a variety of powers to achieve this, including giving directions regarding navigation practices and ships’ masters' actions in respect to ship movements, and regulating and controlling traffic and navigation in certain circumstances.
In retrospect it might be thought of as imposed self-regulation, which is neither government regulation, co-regulation nor self-regulation as those mechanisms are generally understood.
Transport Act 1994 that did occur finally in 2013 did not provide specifically for a mandatory code. Those changes did improve the ‘legislative backstop’ by introducing what the minister for building and construction, Maurice Williamson, on behalf of the minister of transport referred to in Parliament as:

measures that specify the maritime safety responsibilities of port operators and the related powers of the Director of Maritime New Zealand to intervene in the interests of maritime safety. These measures will support and complement the voluntary New Zealand Port and Harbour Marine Safety Code 2004. (Williamson, 2013)

Maritime New Zealand’s environmental scan – the platform for a true co-regulatory approach
As these legislative changes were emerging, progress with the implementation of the 2004 code was increasingly a topic of discussion in the maritime community. There were concerns about the level of attention being paid to it. In particular, discussion of concerns at a 2013 meeting of the Harbourmasters’ Special Interest Group4 triggered Maritime New Zealand to step back and consider the future of the 2004 code.

An example of the basis for the concerns was that, as of late 2013, despite the original intentions associated with the introduction of the 2004 code, while Maritime New Zealand had approved safety management systems in eight ports and harbours, nine ports and harbours were still without safety management system approval. The majority of the nine had submitted documents to Maritime New Zealand, but there was uncertainty about the status of the safety management system documents in some cases (i.e. whether they were at a standard that could be approved). The reality of this was that Maritime New Zealand had not prioritised resources to fulfil the role it had under the code. Maritime New Zealand has a broad remit and other priorities constantly emerged. With the 2004 code work not being part of its formal regulatory role, that work did not have a funding stream to support it. Given that it was anticipated that a proper review and approval process took about 8–10 days of one person’s time, this was not an insignificant matter (Ministry of Transport, 2007, p.21). This situation was far from satisfactory in terms of having appropriate levels of documentation and assurance of safety management systems, as was intended by the 2004 code.

However, the view was widely held that the advent of the 2004 code had brought about a culture of systems-based risk assessment and safety management in New Zealand’s ports and harbours, and there were good examples of this.5 For example, whether or not all safety management systems had been reviewed and approved by Maritime New Zealand, as compared to the situation in 2004, safety management systems did exist in all of New Zealand’s ports and harbours; and some regional councils and ports had strong and functional port and harbour safety meetings that drove collaborative decision making around safety matters.

Following internal consideration of the future of the code, Maritime New Zealand, through a joint Maritime New Zealand/regional council steering group that operates to address matters of common interest, commenced an environmental scan6 to determine how relevant, effective, efficient and equitable the code remained. The environmental scan also addressed whether the port and harbour community considered the code should remain voluntary.7 A representative of the Port Company Chief Executive Group8 was also invited to take part in overseeing this scan. Ultimately, the collective leadership shown by this oversight group was an important contributor to the success of the review of the 2004 code and development of the co-regulatory mechanism and 2016 code, and this continues to be the case.

The scan confirmed that, as discussed above, while the development and implementation of the 2004 code might on the face of it appear to be an example of co-regulation, in comparison with the 2016 approach that would emerge this was not really the case.

Findings of the environmental scan
The findings of the scan were reported in February 2014 (Maritime New Zealand, 2013). The findings of the environmental scan were reported in February 2014 (Maritime New Zealand, 2013).

Table 1: Key findings of the environmental scan

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<th>Dimension</th>
<th>Key findings in relation to the code</th>
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<td>Relevance</td>
<td>The code remained relevant but needed refreshing to renew sector commitment to the process and position of the code, and to strengthen nationally consistent safety management practices. Use of the word ‘approval’ in respect to Maritime New Zealand’s role in confirming that a safety management system met code requirements appeared to confuse accountability for safety outcomes.</td>
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<td>Effectiveness</td>
<td>The code was an effective catalyst for establishing a culture of safety management, and in some regions the level of enthusiasm for collaboratively developing a safety culture was obvious. There were strong indicators, but insufficient evidence, to conclude that the code had delivered a consistent standard of port and harbour safety management across New Zealand. Maritime New Zealand’s inability to resource its code implementation role had compromised effectiveness.</td>
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<tr>
<td>Efficiency</td>
<td>The leadership qualities and maritime knowledge of harbourmasters had a bearing on how efficiently code implementation occurred at the regional level. Maritime New Zealand’s inability to resource its code implementation role had compromised efficiency.</td>
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<td>Equity</td>
<td>Councils vary in size and rating base and some found the financial and human resource requirements to meet their obligations were quite onerous.</td>
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<td>Status</td>
<td>The weight of opinion was strongest towards maintaining a voluntary code. Some smaller councils thought making it mandatory would ensure that it was prioritised at the local level.</td>
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2014) according to the key dimensions of: relevance; effectiveness; efficiency; equity; and status. These findings identified key matters that would need to be addressed to make a refreshed approach successful. They also provided a platform for establishing a truly co-regulatory mechanism. The key findings are summarised in Table 1.

Consideration of the findings led to a set of recommendations that were accepted by the joint oversight group and informed the development of the co-regulatory mechanism that is now in place (including the 2016 code). The recommendations, elaborated in Table 2, were:

1. **Address outstanding safety management system (SMS) ‘approvals’,** to demonstrate that a high level of safety management existed nationally.
2. **Revive and strengthen joint commitment of the port and harbour marine safety code,** with the clear desire for it to be voluntary and provide a national safety standard.
3. **Update the code and supporting guidelines,** to reflect changes to the law, and provide for a style that was less prescriptive than the original code and able to accommodate a broader concept of best practice risk assessment and safety management practice.
4. **Improve the code’s operational efficiency,** to minimise the compliance burden while maintaining the integrity of the ‘approval and audit’ system.
5. **Collect and communicate evidence of the code’s effectiveness,** to provide for statistical trend analysis of port and harbour accidents and incidents, provide data to champion the effective implementation of the code, and support an annual meeting that would provide for sharing of information, learning lessons and continually improving.

**Key design features of the co-regulatory mechanism**

Action on recommendation 1 set the scene for key design features for the co-regulatory mechanism that now exists. As indicated in the introduction, the key design features are: a tripartite memorandum of understanding; joint ownership of the 2016 code, with clear objectives; voluntarily adopted and mutually agreed standards; commitment of human resources to support delivery of an agreed work plan; information sharing; and joint funding of a secretariat.

**Effectiveness of this approach**

The annual report of the New Zealand Port and Harbour Marine Safety Code (Maritime New Zealand, 2017b) included the following statement from the code steering group:

The Code stakeholders can be assured of the effectiveness of the voluntary approach to the 2016 Code. In order to test the level of satisfaction with Code progress and performance, we consulted with the partner organisations during the year. They reported a high level of satisfaction with the rate of Code implementation and Work Plan delivery.

We are confident that the 2016 Code is moving us all in the right direction. The rate of progress this year is very encouraging.

Collectively we believe a voluntary Code applied through a systems approach will enable us to demonstrate that together in partnership we are stepping up to our obligations and responsibilities as guardians and managers of our marine environment. The 2016 Code is our pathway.

This is a significant shift from the concerns being expressed in 2013. It reflects a process of careful review of the previous regime and consideration of the design and implementation of the co-regulatory mechanism that now exists. While this occurred prior to the release of Government Expectations of Good Regulatory Practice in April 2017, the approach taken reflects key expectations expressed in that document.

The expectations indicate that regulatory systems should be assets, not liabilities: i.e. they must deliver benefits that exceed their costs. They also emphasise the need to remove or redesign a regulatory system or component that isn’t delivering net benefits. While no quantitative cost-benefit assessment was undertaken in respect to the 2004 code, concerns raised led to the environmental scan. That scan highlighted problems and weaknesses which meant that the express intention, set out in the 2004 code, of ‘securing the future safety of marine operations in New Zealand ports and harbours’ was apparently not being met (Maritime Safety Authority, 2004).

The expectations describe the features of a regulatory system that is more likely to deliver durable outcomes. Those features include: clear objectives; flexibility of approach to accommodate the attitudes and needs of different regulated parties; proportionality, fairness and equity in the treatment of regulated parties; obligations set out clearly; and scope to evolve. These are all features of the design and implementation of the co-regulatory mechanism that now exists; and, importantly, they are features that have arisen from a co-design process involving government regulator (central and local government working together) and regulated party engagement.
Table 2: Key design features flowing from consideration of recommendations

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<th>Recommendation</th>
<th>Design features</th>
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<td><strong>Address outstanding SMS ‘approvals’</strong></td>
<td>The first step taken was to address outstanding SMS ‘approvals’. An early decision was to acknowledge that referring to ‘approvals’ did not fit comfortably with a voluntary, collaborative approach. This action was reframed as providing ‘confirmation’ to port company and council chief executives that the SMS met the requirements of the code (at that point, the 2004 version). In support of the intent of recommendation 1, as a trial a joint port, council and Maritime New Zealand working group was established. This working group established panels of experts to ‘confirm’ the SMSs that had not previously been ‘approved’. The experts were drawn from each of the partner groups (ports, councils and Maritime New Zealand).</td>
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<td><strong>Revive and strengthen joint commitment of the Port and Harbour Marine Safety Code</strong></td>
<td>In August 2016, reflecting the success of the trial approach to addressing outstanding SMS ‘confirmations’, an MoU was signed by representatives of port company chief executives and regional council chief executives (that were listed individually in the MoU) and the chief executive/director of Maritime New Zealand (Maritime New Zealand, 2017a). While not legally binding, this commits the parties to principles of tripartite joint ownership of the code, voluntary adoption of mutually agreed standards, collaboration, commitment of human resources to support delivery of an agreed work plan, and joint funding of a secretariat. Critically, the MoU is clear that there is no constraint on the ability of councils or Maritime New Zealand to carry out their regulatory functions.</td>
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<td><strong>Update the code and supporting guidelines</strong></td>
<td>Parallel with the trial, and the development and signing of the MoU, the 2004 code was refreshed and the 2016 version released. The 2016 code provides clarity in respect to its objective (‘to ensure the safe management of ships navigating in New Zealand ports and harbours, including the prevention of: injury to people or loss of life, and damage to the environment, particularly to the marine environment, but also to property’). It also establishes clearly who the 2016 code applies to, what it covers, where it should be applied, the respective responsibilities and accountabilities of the parties to the code, and its relationship to legislative requirements. Consistent with the MoU, the 2016 code established a tripartite steering group, working group and a jointly funded secretariat. It established processes for joint peer review panels and confirmed that code activities did not prevent councils and Maritime New Zealand from independent exercise of their regulatory functions. The secretariat and working group have the task of developing a work plan for consideration by the steering group, including a schedule of SMS reviews, and review and development of supporting guidelines. Resources for these activities are provided by the partner groups.</td>
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<td><strong>Improve the code’s operational efficiency</strong></td>
<td>The key barrier to efficiency had been the difficulty Maritime New Zealand had in assigning resources to undertake 2004 code-related activities. It was also noted that the leadership qualities and maritime knowledge of harbourmasters had some bearing on how efficiently tasks could be carried out. The MoU and the 2016 code establish clear commitment to resources and sharing of the work load across all parties to ensure efficient execution of code tasks. Involvement of panels of experts supports the development of leadership and knowledge sharing among all code participants. The 2016 code also addresses potential conflicts of interest. Noting that in some cases harbourmasters are employees of port companies in addition to having harbourmaster responsibilities, the code provides guidance to ensure the independence of the exercise of harbourmaster functions. Conflicts of interest may also occur should a review panel member (for example, from Port ‘A’) have access to information that is commercially sensitive when reviewing the SMS of another port (Port ‘B’), particularly where ports A and B are in direct competition. This matter is addressed in the assignment of panel members, including a requirement to protect and respect commercial confidentiality.</td>
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<td><strong>Collect and communicate evidence of the code’s effectiveness</strong></td>
<td>The code establishes: • a requirement for review panels to report their findings to the working group; • a requirement for annual self-assessments by ports and councils, which are to be provided to the working group; • the need for the development of performance standards to measure the effectiveness of the code. The information provided from these processes is used to prepare an annual report on the effectiveness of the code. The MoU also provides for national meetings of 2016 code participants and stakeholders to assess national performance of the code. The inaugural national forum took place in July 2017 in Wellington. The first annual report was released in September 2017.</td>
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References