

# The challenge of the green agenda

Environmental issues are at the top of the cruise industry's agenda, not least because of the rising tide of regulation. Cruise lines have invested heavily in new technology, better processes and training, but still face a huge task to stay compliant. Jim Banks talks to industry representatives and regulators about new legislation shaping the industry.

**E**very cruise ship has all the responsibilities of a small town, which means not only looking after its passengers' needs to ensure their cruise is a pleasant and exciting experience, but also looking after their safety and their health. And, just like a town, a cruise ship must measure up to a growing amount of regulation that lays down its responsibilities to the environment.

So far, the cruise industry has made a great many efforts to live up to the expectations of environmental legislation and to fully embrace the green agenda.

"Environmental regulations affect the industry locally, nationally and internationally, so ship operators need to keep abreast of them," says William Morani Jr, vice-president of safety and environmental management systems at Holland America Line (HAL). "We go all over the world and often return to the same destinations, so we want to leave them in the same or better condition. It is in our interest to do that so guests can enjoy these destinations. The industry responds well to issues of sustainability."

The company, like other cruise lines, has a safety, environment and health

## William Morani Jr

William Morani Jr is vice-president of safety and environmental management systems for Holland America Line (HAL). Morani joined HAL as director, environmental compliance, in 2003 after a distinguished 28-year career in the US Coast Guard, where he achieved the rank of captain.



## Andreas Chrysostomou

Andreas Chrysostomou is director of the department of merchant shipping at the Ministry of Communications & Works in Cyprus, and chairman of the Marine Environment Protection Committee. In July, he received an 'Outstanding Contribution' award at the Sustainable Shipping Awards.



## Robert Ashdown

Rob Ashdown is director of technical, environment & operational matters at the European Cruise Council. Previously, he spent eight years at the UK Chamber of Shipping. He is also a former chairman of the European Community Shipowners Association's Safety and Environment Committee.



officer on each ship, acting as a senior official to assist the captain. An ever increasing part of this job is keeping up with the growing amount of local and international regulation. And therein lies a huge challenge.

## Disparate legislation

"Eight years ago, when I joined the company, there was a lot of regulation, but now it has grown ten-fold. The problem is that there are many good regulations, but there is patchwork of

legislation, even between different ports in the US. That is a big challenge for ship operators. We have to know where ships can discharge, where they can slow down, where we have to look out for certain species of fish, and so on. This has brought a new dimension to our training programmes, in which keeping up to date with the regulations is a very important element," Morani adds.

From the cruise industry's perspective, the sticking point is not the



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intention behind environmental regulations, but an apparent disparity between regulators' aspirations and commercial reality.

"Environmental issues are top of the agenda, although the industry is also concerned with cost pressures and with piracy," says Robert Ashdown, director of technical, environment & operational matters at the European Cruise Council. "The environment, however, is a long-term, ongoing priority. As legislation becomes more stringent and aspirational – moving ahead of what technology can currently provide – operators must look at the full scope of their business to improve and still provide a great product."

The industry has acted quickly to cope with global requirements to cut the sulphur content of fuel to 3.5% by 2012, and to 0.5% by 2020 under European Union laws. Carbon taxes have forced investment designed to curb greenhouse gas emissions from cruise ships. In 2010, the International Maritime Organization (IMO) moved to ban the discharge of sewage from passenger ships and ferries in the Baltic Sea, and many ports, notably in the US, are imposing new strictures on how vessels can operate.

### Ballast water management

The latest issue to concern many ports, and the IMO, is the discharge of ballast water. While essential for the safe and efficient operation of modern shipping, it may pose what the IMO calls "serious ecological, economic and health problems, due to the multitude of marine species carried in ships' ballast water, including bacteria, microbes, small invertebrates, eggs, cysts and larvae of various species".

Marine life that is transferred to new locations in ballast water may establish reproductive populations in the host environment, becoming invasive, out-competing native species and multiplying into pest proportions. To prevent this, the IMO developed voluntary guidelines for the control and management of ballast water. Now, the Ballast Water Management convention is coming into force.

"The maritime industry must try to avoid moving different species, especially bacteria, as some are invasive

and have depleted local stocks of marine life. The convention has been adopted, but the only problem is that it is not yet ratified, even though states are becoming party to the legal framework," says Andreas Chrysostomou, director of the department of merchant shipping at the Ministry of Communications & Works in Cyprus, and chairman of IMO's Marine Environment Protection Committee (MEPC).

Solving the problem in the short term may require ships to ballast and deballast water during their voyage. In the long term, however, new technology will be required – which, of course, means additional cost for cruise lines.

The IMO has approved some systems, but the feeling in the industry is that uncertainty remains about which technologies to choose. Cruise lines may be hesitant about investing in case they pick the wrong system. Questions have also been raised about how enforceable the regulations are.

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"In the long term, we are looking at equipment to clean water to a biological standard, so it has no unwanted species in it," says Chrysostomou. "There are some technologies out there, so we are on the right track, but existing ships must be modified. The IMO understands the problems the cruise industry faces in terms of cost and the deadline for complying with the new regulations. There is a lot of R&D going on into things like designing ships with no ballast, but we must first get a clear legal framework, then we can get some certainty about the technological solutions."

"When the convention comes into force there will be a core methodology for enforcement. We could make ships deballast at a reception facility, or get the ship to go out and deballast on the high seas. Before that is decided, the next step is to get the convention ratified, clarify the dates for compliance and then be clearer about the technology and the investment that is needed."

### Commercial sense vs aspiration

There is no doubt that the cruise industry is intent on making its position clear: it supports the environmental agenda, but wants to meet its obligations in a way that enables its operations to be commercially viable.

"We must have proper phase-in periods for these regulations and a choice about how to comply," says Ashdown. "If there is only one option, such as buying a very specific type of fuel, then there are constraints on ships and it could lead to changes in itineraries."

"Ports must work with cruise lines, too. For instance, if there is an emphasis on discharging onshore, as in the Baltic Sea, then ports need to improve their infrastructure. The communication is there, but the regulations are mainly aimed at ships. Collaboration between vessel operators and ports needs to be addressed. We are taking the message to the European authorities, but they are politically motivated."

The influence of regulation is certain to have an impact on how cruise lines operate. It could, for instance, shape decisions about the size of vessels or the destinations they visit.

"It is hard to tell what the effect of the growing amount of regulation will be on the cruise industry," says Morani. "So far, it is not driving us to get rid of smaller ships, but as a rule larger ships can be more efficient. They create fewer emissions per berth space, for instance, the hull design can be more efficient and the energy efficiency of equipment is greater. In terms of itineraries, we try to provide the best vacation experience for our guests, so we pick the ports they want to see, and we must move them there as efficiently as possible."

"This is a very competitive industry, and we are very aware of costs, but we have to meet the criteria laid down in the regulations no matter what the cost. So, we do the best with what we have. We use more efficient heating and venting systems, sleeker hull coatings to increase



Operators and ports must work together to meet the challenges of environmental legislation.

efficiency, systems that enable us to reuse heat and energy, and window coatings and paint to reflect heat. We were not thinking about those things 15 years ago, but we are now. Fuel efficiency is very important, and last year HAL reduced fuel consumption by 4.3%, even though the fleet grew by 9%.”

For the cruise lines, the critical factor is whether their voice is heard in the dialogue about the specifics of new environmental regulations. Morani notes: “For instance, the Port of Washington in Seattle proposed regulations that we looked at very closely. They pushed for cruise lines to put biowaste on trucks for treatment on land before

issues to overcome. The technology works very well on land and has been used in power stations for decades, but issues such as the availability of space and the effects of corrosion make it difficult to use the equipment at sea. And it is very expensive.

“Cruise lines don’t want to invest in technology unless there is a guarantee that it will work,” says Ashdown. “We want flexibility in the regulations to try alternative technology – even if it ultimately doesn’t work. Passengers want innovative ships, so the industry invests a lot in new technology, but command and control, and proscriptive legislation with deadlines, doesn’t fit with the ongoing research and investment that cruise lines are making,” says Ashdown.

“The industry shares the regulators’ concerns, but we differ on how to achieve the same goals. We must continue to give consistently good arguments and examples of what the industry has done in order to get the right framework to allow the industry to improve its environmental performance while still operating a commercially successful business.”

There are signs that the regulators are keen to listen, and Chrysostomou stresses that the industry’s concerns are important to the regulators. The key continues to be balancing the demanding time frame for new regulations with the development of workable technologies. ■

“ If there are ports that cannot accommodate the new larger ships, they are missing out on the future growth in cruising. ”

#### Where is the technology?

Ashdown is keen to emphasise that the industry has responded to the spirit of the regulations, and feels that operators do not get the credit they deserve.

“In some ways, the cruise industry is ahead of the curve,” he remarks. “Its treatment of wastewater and its recycling efforts are incredible. But in some areas we are butting up against the limits of available technology, so we need to wait until technology catches up. The question is, what do we do in the meantime? For ballast water regulations, for example, it is difficult to get the technology to match the requirements. That is an egregious example of aspirational regulation.”

discharge into the ocean. But the way we handled biowaste caused no environmental harm, while taking it on trucks raised the possibility of spillages and created emissions from fuel usage. Overall, the idea was no better than what we did anyway.”

“Similarly, with shore power, we have that capability on some of our ships, and it is good if the power is created from hydroelectric generation, but if it comes from coal, for example, then the emissions may be higher overall. So, when it comes to regulation you have to look at the big picture.”

Technology dominates the debate. For ballast water, there is some movement towards workable systems, though for sewage treatment there is much work to be done, and for scrubbers there remain many