

# Delicate balance

Christopher Kanal talks to Carnival Corporation's **Captain James Hunn**, **John Kaltenstein** of Friends of the Earth US, and **Ross A Klein** of Memorial University of Newfoundland about how new regulations will affect cruise lines and how to create a greener industry.

In 2008, Congressman San Farr of California, together with Illinois Senator Dick Durbin, introduced the Clean Cruise Ship Act of 2008 to establish national standards for discharges from cruise vessels into the waters of the US. If passed, the act will allow states to adopt more stringent discharge standards in their waters and close existing loopholes in federal law by creating a 12 mile-wide coastal zone in which cruise ships are prohibited from dumping.

Two months later in June, the California Air Resources Board approved the toughest-known restrictions on ship emissions in the world. From July 2008, all cruise ships, as well as tankers and cargo vessels, will have to switch to cleaner-burning fuel to power their vessels when they come within 24 nautical miles of California's coast. For auxiliary engines, Phase 1 would begin on the effective date of the regulation. For main propulsion engines and auxiliary boilers,

it would come into force on 1 July 2009.

The new regulations highlight the growing environmental scrutiny that the cruise industry is coming under in the US and beyond. In an industry that in the US alone is worth more \$32 billion and generates over 330,000 jobs, the need to be actively environmentally responsible is crucial, particularly in the wake of the \$33.5 million in fines and penalties the industry has had to pay in recent years for pollution. 'We clearly have a



very different environmental culture than we did six years ago,' says Captain James Hunn, Carnival Corporation's vice-president of maritime policy and compliance. 'If you accept the premise of Friends of the Earth (FOE) then legislation hasn't been able to keep pace with the rapid growth of the industry, but it is very clear to see that environmental legislation is moving forward at lightning speed and faster than it ever has in history.'

'Our customer base, our stakeholders, our investors all require not only good environmental performance but transparency in doing that. For the third year in a row Carnival has put out an environmental report with information ranging from total amount of wastewater discharged to the total amount of garbage produced.'

Despite cruise ships and ferries representing only about 12% of the entire shipping industry worldwide, their high profile means that they are a point of focus for public scrutiny. The need for a cleaner, more responsible cruise industry has never been more necessary, particularly given its incredible rate of growth. Between 1980 and 2000, North American boardings of cruise ships increased 500%, to seven million annually. Worldwide, 12 million cruise boardings were tallied in 2000. To deal with this dramatic growth has meant putting ever larger and greater numbers of cruise ships on the seas.

For John Kaltenstein, programme manager of the Clean Vessels Campaign at Friends of the Earth US, the cruise industry still has a long way to go. 'I am not convinced that the operators are doing enough at the moment,' he says.

'We have done a fairly good job of regulating on road sources, whether they are cars or trucks, and even among the stationary sources, such as power generation, but the transportation sector on water has lagged far behind. It has been only recently where there has been even a movement to increase the stringency of the regulations that govern this whole regime.' Kaltenstein is currently working on a Marine Vessel Emissions Reduction Act of 2007 that is being sponsored by Californian Senator Barbara Boxer and Diane Feinstein. It would effectively require a switch to cleaner fuels.

Ross A Klein, professor of social work at Memorial University of Newfoundland, has just published *Paradise Lost at Sea: Rethinking Cruise Vacations*, a major part of which is focused on environmental issues. Despite being a strong critic of the cruise industry, Klein believes that it has the ability to clean up its act but it comes at a cost. 'The problem is it means they would have to price themselves comparable to other products,' Klein says.

'Today we get cheap cruises at the expense of the environment,' he claims. Passengers also need to take more responsibility as well. 'People are taking cruises with little consideration of the environment because they're attracted to the price,' he adds.

FOE wants the cruise industry to match words with demonstrable actions and work harder to win back people's trust after a number of incidents, particularly in the 1990s. 'It's tough to take their word on it in light of past practices,' says Kaltenstein. 'I think it is getting better in general but we still have instances of "magic pipes" so it's tough to say that the whole industry has improved significantly.'

According to Hunn, some lessons were tougher to learn than others. 'Two years into our environmental probation, a light bulb started going off and we said that security and health can be managed in much the same way as we are managing environmental matters so we grouped them. No doubt in our minds that it has made our ships safer, healthier and more secure.'

While the Cruise Lines International Association has a 50-page document detailing environmental standards, Hunn points to his firm's 14 additional environmental standards, including one that states an environmental officer needs to be onboard each and every ship at all times. In 2006, Carnival Corporation required all their companies to be ISO 14001 certificate accredited, currently considered the most robust environmental management system in the world.

In the US, several federal agencies have some jurisdiction over cruise ships in US waters, but no one agency is responsible for or coordinates all of the relevant government functions. The US Coast

Guard and EPA have principal regulatory and standard-setting responsibilities, and the Department of Justice prosecutes violations of federal laws. In addition, the Department of State represents the US at meetings of the International Maritime Organisation (IMO) and in international treaty negotiations and is responsible for pursuing foreign-flag violations.

### New technology and fuel efficiency

For Hunn, the best way of achieving improved environmental performance is through new designs. Across Carnival's brands, 18 ships are scheduled to be delivered by 2012. 'Our fleet is pretty young and our fleet will get younger over the next five years as newer ships come into the feet,' Hunn says. 'Each new ship has better environmental equipment and better engines.'

Klein says the problems are with the specifications given to the shipbuilders by the cruise corporations. 'They're just meeting what the corporations are asking for,' he says. 'I've seen specs for sewage treatment systems that one line put in its contracts in 2000, and it was all traditional technology.'

While Kaltenstein finds it frustrating that the bigger cruise operators are not doing more to incorporate technological developments to improve fuel efficiency, for Hunn the issue lies with the fossil-fuel intensive nature of the industry. 'Should we take the airline approach that offers our customers the opportunity to offset their personal footprint or should we go to offsetting the entire footprint ourselves? They are all under consideration,' he says.

One of the primary methods of complying with the Marine Vessel Emissions Reduction Act of 2007 would be switching from bunker fuel to marine distillate fuel. FOE says this is a feasible way of lessening health impacts. Although low sulphur fuel costs 50-72% more than bunker fuel, the cleaner fuel standard of the bill applies only to ocean-going vessels within a 200-mile distance of the US west coast and an as-yet undetermined distance from other US coasts.

Cruise operators will only be required to use marine distillate for a small portion of a voyage. FOE points to major shipping company Maersk, which introduced a policy

of switching from bunker fuel to distillate fuel (2,000 ppm) for ships operating within 24 nautical miles of certain California ports.

Many in the cruise industry have raised concerns about the technical feasibility of such a switch. 'Could we burn distillate fuel on our ships?' asks Hunn. 'Yes we could, but we would pay such a premium for it that it doesn't make economic sense.'

Hunn says a lot more research is needed into making cleaner fuels more efficient. 'We experimented with biofuels and we ended up trashing some engines because the quality of the biofuel wasn't up to scratch.'

The lack of new technology is the chief restriction, particularly when it comes to cutting air emissions. 'We have got the only air discharge stack scrubber afloat right now but when you take the sulphur and the particulate matter out of the air, you have it in the water,' Hunn explains. 'How do you treat the water? There is no free lunch.'

Switching to cleaner fuels means not just a significant drop in performance but also, in some cases, higher emissions of CO<sub>2</sub>. 'It's a trade-off because you can make an engine very good at keeping the NO<sub>x</sub> out of the air but it makes the engine less fuel efficient so you burn more fuel, meaning more CO<sub>2</sub>. It's a catch-22,' Hunn says.

### Polar pollution

In the Antarctic, cruise ship traffic has jumped from 50 ships in 2004 to 250 ships in 2007. Walter Nadolny, an associate professor in marine transportation at the State University of New York's Maritime College says Arctic waterways should be protected from a growing influx of cruise ship traffic. Both Holland America and Princess Cruises have run itineraries to Antarctica.

Nadolny believes the Arctic should be declared a special area with strict safety measures and regulations. These concerns are echoed by the main international environmental NGOs, including the Antarctic and Southern Ocean Coalition (ASOC), Greenpeace and FOE. Despite some recent positive developments, FOE says nothing so far establishes standards of the sort that ASOC and its member groups have recommended.

'The cruise ships are operating in waters of the Antarctic where there is inadequate government regulation and enforcement,' says Kaltenstein. 'When we go to places

like Antarctica, we have Antarctica pilots onboard that understand the area,' says Hunn. 'We bring the right expertise to bear.'

In 1990, the IMO designated the Southern Ocean south of 60 degrees South Latitude as a 'special area' under Annexes I (oil) and V (garbage) under MARPOL 73/78, banning the disposal at sea of oily residues, chemicals and garbage from ships. This laid the foundation for the IMO to establish appropriate rules concerning vessels operating in that region. Up until then, few specific rules had been set by the IMO for the Antarctic. 'We don't know quite what the effects of the adventure cruises are going to be so it is important to use the precautionary principle because you just can't open the floodgates,' says Kaltenstein. 'When I hear people say you just shouldn't go there, I think of the oceanographer Sylvia Earle, who says you should go there but you should be very careful when you do,' responds Hunn, saying that part of the industry's social responsibility is to understand the impacts we have on the environment. 'That's probably a better overall impact than just ignoring them. We are human beings. We will never ignore those places altogether and people want to go and see them.'

The sinking of the *M/S Explorer* in November 2007, which resulted in pollution from the diesel fuel and other materials onboard has drawn attention to the environmental risks of operating in these extreme environments. FOE believes that the IMO should be examining as a matter of priority the need for ice-strengthening standards for the Antarctic; the discharges of sewage and black water; the banning of heavy fuel oil (HFO) in the Southern Ocean; and the introduction of alien species through ballast water, bio-fouling or by other means into the Antarctic marine ecosystem. In particular, HFO has a detrimental effect on marine life when spilled into the sea, being viscous, hard to degrade, long lasting and poisonous.

### Standard-bearing

An area of concern for ASOC is the absence of a comprehensive system of traffic monitoring for Antarctic ships, which includes vessels' relevant characteristics – essential for establishing, applying and enforcing better standards for ships in the Southern Ocean. The International Association of Antarctica

Tour Operators maintains a registry of its members' vessels, but their membership is not 100%.

Many operators are opening up new itineraries to smaller ports. For FOE the potential impact to local communities needs to be examined. 'The infrastructure needed to handle these ships coming in requires vast public expenditure from areas that do not have the capacity or resources to do that so they quickly become very dependent on these cruise ship industries,' says Kaltenstein.

'When cruise companies get established locally they become extremely important and powerful political players. They are able to exert a tremendous amount of influence on these communities once they get established.'

While Kaltenstein acknowledges the financial benefits that the cruise industry can bring to a community, he says they should analyse whether it is really beneficial and explore alternative ways of generating revenue, such as through eco-tourism. As the cruise industry expands itineraries into South America, Kaltenstein says this debate is necessary. 'You are going to see a lot of growth there and the issue is can these communities handle it or will they be profoundly affected by this.'

'The environmental side of Carnival Corporation is now involved in itinerary development to understand what the impact will be,' explains Hunn. 'If you think about the cruise industry, our business units move from city to city, country to country, all over the world so we have to think of the impact we have not only on the ports we visit but the water we are in and the people that live where we go.'

'Those trends show that we are clearly getting better, we are clearly getting greener, we are clearly getting more environmentally friendly and our reports going forward into the future will continue to reflect this.'

It is very much in the cruise industry's hands how they want to approach the environmental dilemma. With the need to win the public's trust, it is imperative that clear and transparent strategies are put in place for the long-term health of the cruise industry.

'If the oceans become unnavigable because of pollution then we are out of business,' says Hunn. 'It is imperative that we keep the oceans clean and pristine wherever we go, and leave them as we found them.' wc