Seaports advocate that marine spatial planning include working waterfronts

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Seaports have always been and will continue to be integral to the economy, environment and security of the regions and nations they serve. As such, marine spatial planning processes now underway or being considered worldwide must factor in the seaport industry's role and how goods move around the globe.

The American Association of Port Authorities (AAPA) supports marine spatial planning efforts that recognise and include human use aspects of the coastal environment. Changing trade patterns, such as those that may arise with the Panama Canal expansion slated for completion in 2014, will have a major impact on the United States and other countries. Emerging markets are continuing to grow, along with public and private investments in infrastructure to serve those markets.

Shifting trade patterns will have environmental impacts on coastal communities that must be mitigated, but will also present tremendous opportunities for increased efficiency of moving goods.

Facilitation of commerce, preservation of habitat, potential impacts of climate change, access to energy sources and growth of coastal communities – including increased public access – are just a few of the many pressures that confront those responsible for managing coastal resources. Marine spatial planning offers an opportunity to chart the future, ensuring the needs of all are met and that human uses of the waterfront are protected.

Seaports deliver prosperity

Throughout civilization, seaports have served as a vital economic lifeline for the movement of goods and services to people around the world. Modern, navigable and secure seaports are vital to international trade. They're also vital to economic prosperity, in securing a country's borders and as stewards of the coastal environment.

Seaport activities and infrastructure development must also be sustainable. To that end, port authorities and their business partners are investing billions of dollars annually to significantly reduce environmental impacts on their communities and natural resources.

In the US for example, seaport activities generate nearly $3.2 trillion a year in economic impacts, employ 13.3 million people in trade-related jobs and move more than 2 billion tonnes of import, export, domestic and military freight, including food, clothing, medicine, fuel, building materials, electronics and toys. US ports also enabled some 9 million Americans a year to take cruise vacations in 2008.

Because they are gateways to the rest of the world, a nation's seaports are critical to its long-term prosperity. On the waterside – with ships getting increasingly larger – dredging harbours and navigation channels is more crucial than ever, both to maintain their existing depths and widths, and to expand them to accommodate these larger ships.

Amazingly, even though the need for dredging is great, the US government doesn't fully utilise the federal Harbor Maintenance Tax for its intended purpose – to pay for navigation

Dredging in the Port of Houston shipping channel. Dredging is more crucial than ever with the increase in ship sizes.

Integral to the economy, environment and security of the regions and nations they serve, the seaport industry's role and how goods move around the globe must be factored in when implementing marine spatial planning processes.

dredging. Since its inception in 1986, a large portion of these tax collections – now estimated to total about $5 billion – have been used to offset the deficit while serious dredging needs have been neglected. These revenues must be fully used to maintain navigation channels at their required dimensions.

In addition, to provide incentives for removing cargo from America's most congested roadways and put it on the water, AAPA advocates eliminating the domestic cargo portion of the Harbor Maintenance Tax. While having minimal impact on the total revenues, doing so will make shipping domestic freight by water more affordable, while promoting the more environmentally friendly short-sea shipping option and helping alleviate highway traffic congestion on some of America's busiest highways. Increased waterborne movements of cargo aren't only critical from an environmental and safety standpoint, they will invigorate the economy by immediately creating jobs and helping construction and engineering businesses, both large and small.

Committed to sustainability

As stewards of the coastal environment, seaports are addressing air and water quality issues related to their operations and are working to keep invasive species from ballast water out of their waterways. They are also working with their communities to reduce their carbon footprint and greenhouse gas emissions from the goods movement supply chain.

In 2007, AAPA passed a resolution encouraging sustainability as a standard business practice for ports. As seaports implement sustainability measures – the balancing of economic, environmental and social concerns – they will continue to take voluntary actions yielding environmental benefits to the communities they serve and the coastal environments they help protect.

Many ports have implemented an Environmental Management System (EMS), which uses a process-based approach to manage for and reduce environmental risks. In the autumn of 2008, AAPA launched its third round of the Port EMS Assistance Project, which has aided more than a dozen port authorities in the creation and implementation of EMSs since the assistance project's inception in 2005.

Public ports also regularly develop wetland sites; create, restore and enhance native habitat; and monitor water quality. Since most port facilities include large expanses of paved surface, managing and filtering stormwater runoff is also a high priority.

When shorelines or water quality becomes compromised, either due to past practices, normal operations, accidental spills or nuisance species introductions from ballast water, ports often restore coastal habitat as part of their broader stewardship efforts. And due to the natural process of sedimentation, periodic navigation channel maintenance is needed.

Although the US Army Corps of Engineers is responsible for dredging the country's federal navigation channels, ports and their business partners pay to dredge more than 100 million cubic yards annually from their vessel berths and private terminals. Of course, all this dredged sediment – some of which is contaminated – must go somewhere. The best and most desirable alternative is to find beneficial uses for it. For example, Louisiana's Port Fourchon is using it to rebuild a natural forest ridge that was reduced by coastal erosion. Such ridges serve as buffers between the sea and coastal marsh habitats for fish, shellfish and other wildlife. Other beneficial uses range from construction fill material for projects like piers, wharves, buildings, bridges and airport runways, to restoring eroded beaches, capping landfills and certain in-water contaminants, and even for constructing golf courses.

Environmental policy challenges

From an environmental policy perspective, handling large, oceangoing vessels poses a unique challenge for seaports. The very nature of oceangoing vessels is that they are international . . . most visiting ships are foreign flagged and have global itineraries.

AAPA has supported efforts to regulate oceangoing vessels at the International Maritime Organization (IMO) through MARPOL Annex VI, the treaty that sets emission limits for engines.

The MARPOL treaty entered into force several years ago, and AAPA helped lead the charge for the US to ratify and implement it. Perhaps more importantly, the US delegation recently sought a number of changes to MARPOL Annex VI to make it more stringent, and AAPA supported these changes. The changes will apply to all countries currently party to Annex VI and will produce meaningful emissions reductions from oceangoing vessels. Furthermore, AAPA earlier this year announced its support for the US Environmental Protection Agency's joint proposal with Canada to designate specific coastal water areas as an Emission Control Area, or ECA. Such action would reduce the allowable emission of nitrogen oxides (NOx), sulfur oxides (SOx), and particulate matter (PM) from ocean-going ships, most of which are registered outside of the US.

US ports have encouraged an ECA designation for all three pollutants (SOx, NOx and PM) under the international MARPOL Annex VI treaty. Considering that emissions from ocean-going ships are significant contributors to our national mobile-source

Water sampling at the Port of Tacoma. Seaports are constantly addressing air and water quality issues related to their operations and are working to keep invasive species from ballast water out of their waterways.

As large as it is, the containership MSC Allessia, seen here at the Georgia Ports Authority's Garden City Terminal near Savannah, has less than half the capacity of the newest megaships now being built.

emission inventory, it's imperative that, going forward, tighter emission controls be put in place.

In addition to policies limiting air emissions from ships and other freight-handling sources, AAPA supports water quality initiatives that protect and enhance natural habitats. Recognising the problems caused by aquatic invasive species, AAPA supports the IMO's ballast water treatment treaty, as well as legislative efforts to set a federal standard for ballast water treatment systems.

Realising that aids to navigation are critical to the safe movement of vessels into and out of harbours, AAPA advocates funding to support the National Oceanic and Atmospheric Administration's mapping, charting and survey services, and its collection and reporting of tidal and ocean currents data, including the Physical Oceanographic Real-Time Systems, better known as PORTS.

AAPA also supports re-authorisation of the Coastal Zone Management Act, including recognition of the importance of working waterfronts. The Association continues to urge the US Congress to protect its nation's waterfront areas for vital port operations.

Additionally, AAPA urges more research be done to help fill information gaps pertaining to climate change and how climate change may affect seaports. To that end, AAPA is partnering with Stanford University and the International Association of Ports and Harbours to survey port authorities regarding their efforts to plan for possible effects of climate change.

As a vital economic lifeline and a critical link to access to the global marketplace, it is important to take into account the value seaports and their connecting infrastructure have on a nation's economic condition.

Oceans, ports and the navigable waterways leading to them are critical components of the marine transportation system, and AAPA encourages individual governments, including the US Congress and executive branch, to ensure the movement of freight is included in marine spatial planning and in legislation that provides appropriate policies and funding for goods movement infrastructure.

ABOUT THE AUTHOR ORGANISATION

Kurt Nagle has over 30 years of experience in Washington, DC, related to seaports and international trade. Since 1995, Mr. Nagle has served as President and Chief Executive Officer for the American Association of Port Authorities (AAPA). Mr. Nagle began working at AAPA, the alliance of the leading public port authorities throughout the Western Hemisphere, in 1985.

Prior to joining AAPA, Mr. Nagle was Director of International Trade for the National Coal Association and Assistant Secretary for the Coal Exporters Association. Previously, he worked in the Office of International Economic Research at the US Department of Commerce. Mr. Nagle serves on the Executive Committee of the Propeller Club of the United States and is a former commissioner of PIANC, the International Navigation Congress. Mr. Nagle holds a Master's Degree in Economics from George Mason University.

Founded in 1912, the **American Association of Port Authorities** is a trade association which represents more than 160 public port authorities in the United States, Canada, the Caribbean and Latin America. In addition, Association members include more than 320 sustaining, associate and honorary firms and individuals with an interest in the seaports of the Western Hemisphere. AAPA is dedicated to serving deep draft public ports by enhancing port management professionalism, and advocating issues critical to public seaports.

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