Plymouth Hoe from Staddon Heights
Image Credit: Nilfanion

Transforming Our Coastal Cities into Ocean Cities: An Urgent Call for Action

By Simon J. Pittman & Katherine Moseley

We are living in extraordinary and transformative times experienced nowhere more dramatically than the fastest growing urban habitat on this Blue Planet—coastal cities. By 2030, approximately 5 billion of the world's 8 billion residents will live in urbanized areas with more than half of the global population living within 100 km of the coast. Whether growing upward or outward, or both, the impact of coastal cities on the ocean and consequently the entire planetary system is huge and intensifying. In regions of rapid population growth, some coastal towns have become megacities in just a few decades with dire consequences for the health of the city seascape.

The UN estimates that cities consume 78 percent of the world's energy and produce more than 70 percent of greenhouse gas emissions. Collectively, the 10 cities (eight of which are coastal cities) responsible for the greatest greenhouse gas emissions contribute more carbon dioxide to the atmosphere than all of Japan. (Moran et al., 2018). Accelerated global emissions of atmospheric carbon dioxide have increased the severity and frequency of marine heat waves and powerful storms, and are driving fundamental changes in ocean chemistry and species distributions.

As cities expand upward and outward so too is the ocean expanding as the planet continues to warm. By 2050, over 570 low-lying coastal cities will likely face a 0.5 meter rise in sea level putting over 800 million people at risk from flooding and costing at least $1 trillion USD. Concerns over the atmospheric pollutants impacting ocean health are relatively new, but coastal cities have long been directly responsible for considerable chemical pollution of rivers, estuaries and the coastal ocean through runoff and waste disposal and the more recent scourge of plastics. Industrialized city seascapes worldwide have left an unhealthy ecological footprint that extends far beyond their operational areas both in time and space.

Cities also possess great adaptive power in the face of rapid change. Through huge collective social and economic capital and an enormous capacity for technological innovation,

What makes an Ocean City?*

Ocean Cities know the ocean is precious.

Ocean Cities embrace, celebrate and cherish ocean biodiversity, and the city's cultural and spiritual relationship with the ocean.

Ocean Cities enable safe and socially inclusive public access to the ocean and enhance opportunities for activities that promote community wellbeing.

Ocean Cities give voice to the ocean through integrated civic planning, policies and practices placing ocean health and integrity at the heart of their decision making.

Ocean Cities stimulate curiosity, deepen knowledge, emotional connection and care for the ocean.

Ocean Cities ensure that all school children visit the ocean and include ocean literacy in extra-curricular learning.

Ocean Cities understand and take responsibility for impacts to the global ocean and take actions to minimise negative impacts.

Ocean Cities actively enhance biodiversity of the city seascape through restorative and regenerative actions and biophilic design.

Ocean Cities nurture marine citizenship for a more responsible and compassionate relationship with the ocean.

Ocean Cities prepare all residents for the consequences of accelerated climate change by co-creating a resilience strategy.

*Interconnected characteristics of equal importance

The Ocean Cities Pledge:

*Statement on the Importance of Transforming Coastal Cities into Ocean Cities
(Formulated for The Nature of Cities Summit, Sorbonne, Paris, June 2019)*

We live on the Blue Planet and increasingly the Urban Planet. We recognise that the global ocean holds 97% of the life-giving water on our planet and most of us live near the ocean or near rivers that flow into the ocean.

We need healthy oceans to sustain human life and wellbeing. We recognise that urban populations benefit immensely from proximity to a thriving and healthy ocean, but our actions are continuing to negatively impact the ocean. We call upon cities to clearly and explicitly identify their impacts to the ocean and mitigate those threats.

We recognise that citizens are pivotal in transforming coastal cities into Ocean Cities where we cherish the ocean and work with the ocean to create healthier, happier and more resilient city living.

We call upon cities to take urgent transformative actions in support of the global ocean and to rapidly progress towards a more harmonious relationship between citizens and the sea.

cities are capable of rapid delivery of creative and effective solutions to address complex challenges. Cities therefore present both a "wicked problem" and tremendous potential for efficiency in resource use. This is why cities are being recognized as pivotal places to address the climate crisis and many other socio-ecological challenges (e.g., smart cities, biophilic cities, sponge cities, circular cities). UN HABITAT describes a city as a discrete place-based nexus for tackling multiple interconnected sustainable development goals.

Global Call for Action

We contend that coastal cities are hope spots for environmentally responsible and socially progressive city living and critically important places to prioritize regenerative actions for improved planetary health. Here, we present our holistic concept of Ocean Cities together with a global Call for Urgent Action to citizens and leadership of all coastal cities. We offer suggestions for transformative ideas, feelings and actions that if enacted collectively would transform a coastal city, no matter where in the world, into an Ocean City with greater prospects for enduring community wellbeing. *We Call for Urgent Action through our Ocean City Pledge* (Box, opposite page) co-created with Professor Tim Beatley of the Biophilic Cities Network and refined through collective thinking during our workshop at The Nature of Cities Summit in Paris (June 2019). With delegates from twelve countries we discussed three key questions: How can we enable healthier coastal cities through blue city plans, practices and policies? How can we better connect cities and the sea for inclusive wellbeing and healthy oceans? What do we want the future relationship between coastal cities and the ocean to look and feel like? Our synthesis of this dialogue is presented here for the first time.

We propose that transformation of coastal cities into Ocean Cities along a restorative blue urban pathway to healthier, happier and sustainable city living has tremendous benefits for the future of the global ocean and the wellbeing of humankind. Longer-term holistic thinking is key. Before the climate crisis, city planning rarely considered futures beyond 25 years. This is changing. It is now increasingly acknowledged that active shaping of future trajectories by city leadership fosters external confidence in a city's management of its assets and risks making it more attractive to businesses and promoting resilience. Exploration of long-term aspirations and policy options also brings fresh perspectives on unique local assets generating new marketing opportunities. We recognize that becoming an Ocean City has potential economic value in destination branding, but taking the blue urban pathway towards an Ocean City offers enduring benefits that flow far deeper into civic life than destination branding alone.

Global Leadership from Ocean Cities

We believe it is now time for all coastal cities worldwide to become a potent voice on behalf of the health and integrity of our Blue Planet's living system and to lead the world in global ocean conservation. Ocean Cities must walk the talk by working to regenerate and protect marine ecosystems and biodiversity. Ocean Cities must begin to include the marine nature around them in their design and planning and must work to conserve and celebrate this nature including our cultural connections. As such, Ocean Cities are blue biophilic cities where marine nature is thriving and appreciated and where we design and build in ways that foster a deeper relationship with the ocean and its inhabitants (Beatley, 2018).

Ocean Cities must work to educate citizens about the central role that oceans play in regulating climate and sustaining our Blue Planet. Knowledge about and care for oceans should be considered basic literacy for all. Citizens understand that the city is not separate from the ocean but interconnected. Citizens acknowledge the importance of the ocean in their lives, understand the city's impact on the ocean and recognize the difference they can make through collective action. From an integrated land-sea planning perspective, city maps and city boundaries could be adjusted to include ocean environments. Perhaps the natural capital and ecosystem services could be valued and communicated.

Ocean Cities seek to deepen and enhance connection with the ocean while also recognizing and working to minimize exposure of people and property to coastal hazards and sea level rise. Ocean Cities can increase resilience. Resilience comes about when a city collaboratively reviews its ability to address challenges and vulnerabilities in the face of accelerated climate change. Collective action that builds upon existing processes and activities enables cities to adapt effectively. The process of becoming an Ocean City provides a strong ocean-centric platform to unite citizens, local projects and existing priorities in a mutual vision and helps characterize a unified agenda, specifically tailored to the city's strengths and vulnerabilities. Becoming a resilient Ocean City is an iterative and inclusive process enriched by information flow from a diverse cross-section

Victoria Peak, Hong Kong
Photo Credit: Florian Wehde

of city communities while keeping the mutual vision of the Ocean City goals in sight. Programs to increase ocean literacy will ensure that citizens are well-informed of current and future environmental threats and businesses future-proof far in advance of projected impacts. Furthermore, a program of systemic transitioning to low impact sustainable practices in all sectors will promote local and global ocean health and resilience.

Healthy Cities for Healthy Oceans and Healthy Citizens

Ocean Cities recognize their place at the forefront of both human and planetary health. Ocean Cities recognize the wellbeing benefits that flow from safe access to a healthy blue space and work to enable inclusive participation in health promoting activities. Ocean

Cities enable participation in stewardship and restorative activities (e.g., habitat restoration/regeneration and clean-ups of beaches and waterways) acknowledging the mutual health benefits for people and the ocean. Citizens in Ocean Cities are empowered to understand how they can help to minimize impacts to the ocean, for example, through consumption decisions that favor sustainable seafood, avoiding the use of single-use plastics, reducing emissions and taking part in citizen science monitoring projects. Citizens can call for action and increasingly will. They have the right to demand access to clean bathing waters, clean beaches, productive and diverse marine habitats and the return of charismatic megafauna (e.g., whales, turtles, seals). Ocean Cities value active citizens because they provide

vital feedback to decision makers, exert pressure for reform and may even solve some problems themselves. Much of this kind of activity is already underway and growing in coastal cities worldwide. (Beatley, 2014).

Deepening Ocean Connections Beyond Destination Branding

In 2013, Plymouth in southwest England declared itself as Britain's Ocean City through a re-branding initiative to stimulate economic growth with the city's unique and internationally recognized maritime cultural roots. With growing awareness of the plight of the ocean, Plymouth has since taken another step along the blue urban pathway through the designation of the UK's first National Marine Park in September 2019. Shaped in part by the novel holistic concept of a city marine park, Plymouth is the test bed for a new city-led non-

statutory marine park concept aiming to increase inclusive participation, re-invigorate pride-of-place and nurture strong pro-ocean feelings and actions through marine citizenship. Other transformative ocean health initiatives are also underway including the Plymouth Plan for Plastics resulting in the UK's first plastic-free waterfront and a range of city-wide actions to achieve carbon neutrality by 2030 following Plymouth City Council's declaration of a climate emergency in 2019.

While many coastal cities are rapidly expanding, some historic port cities are experiencing post-industrial shrinkage due to demographic changes and logistical changes in the shipping industry (e.g., increase in very large container vessels), requiring an adaptive response that has in some cases resulted in regeneration of post-industrial coastal space for recreational use. Such coastal place-making transformations allow communities to regain access to restorative blue spaces that were formerly inaccessible because of industrial activities. This change in land-use also provides great opportunities for implementation of the Ocean City concept through community-centered design of public spaces to enhance connection with the ocean and bolster social resilience.

The Time for Accelerated Action Is Now

Our coastal cities are places where citizens and the sea are inextricably interwoven, yet seaside living has taken its toll

on ocean health and too few cities have empowered citizens to participate in creating safe, accessible and healthy city seascapes to enhance wellbeing for the common good. Our future is in the hands of coastal cities and what we do now as citizens, and collectively as cities, will determine the planetary conditions for future generations. We offer the Ocean Cities concept as a connecting, integrating and transformational city-wide framework leading to a more responsible, healthier, resilient and compassionate relationship between people, our cities and the ocean. We invite all coastal cities to consider our Call for Urgent Action and to adopt our suggested transformational actions by pledging to become an Ocean City. It is easy to forget when we live in cities that the ocean is the heart of this planet providing life-giving processes without which the planet would be barely habitable. The time for accelerated transformative action is now.

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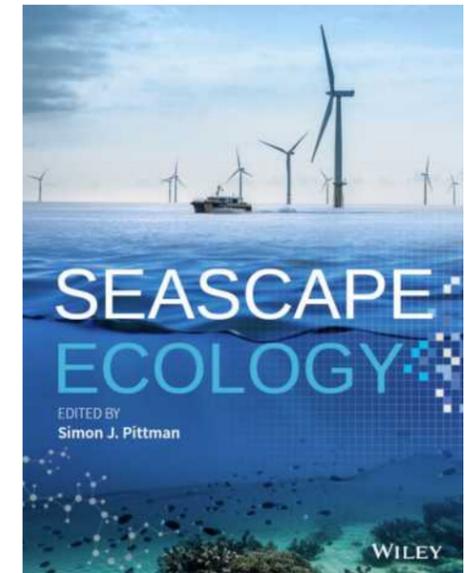
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