Our oceans are out of balance – can we learn some tips from feng shui?

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Credit: AI-generated image (disclaimer)

Feng shui is the ancient Chinese philosophy of rearranging built structures in the environment to generate *qi* or "energy". But it may have increasing relevance for when, where and how we build into our oceans.

This month 1,500 delegates from 80 countries gathered in Montpellier, on France's Mediterranean coast, for EcoSummit 2016, to devise sustainable solutions on how to cross the boundaries of ecology and engineering. At the heart of these discussions was marine spatial planning, an important element in the harmony and balance, or feng shui, required in our oceans.

Fragmented seascapes

Globally, we have a long history of building into the sea, dating back to the first Roman seawalls and breakwalls. Down the road from the conference centre, the coastline is armoured with stone laid down in the 17th century during the reign of King Louis XIV.

Japan has been adding artificial reefs to enhance fish production since the 18th century. This practice continues today, ranging from opportunistic sinking of ships to specially constructed installations.

Modern construction has overcrowded our oceans with energy platforms, the most densely constructed of which are often located in the smallest water bodies. The result is a fragmented seascape that creates barriers to important ecological migrations and processes.

The pace of this marine development is rapid and global, but remains fairly unregulated in time and space. Imagine how you would feel in a house where all the furniture was placed in one room, or where the doors to your dining room were nailed shut?

This is occurring in our oceans, where developments may be concentrated in just one area and hard structures block or modify natural water movements. Like our houses, we need to "feng shui" our oceans to achieve a state of equilibrium between societal needs and the environment.

The future of our oceans isn't set in concrete, but can be a balance between hard and soft engineering – as we heard from speakers from around the world.

Balancing yin and yang

Our oceans are becoming crowded. Marine spatial planning is the feng shui that can balance the needs of different ocean users – energy and aquaculture, for instance. But we need to make sure that the resources we receive from our oceans are matched by the efforts we invest in conservation and restoration.

Often the need to defend valuable commercial property from ocean forces overrides the ecological considerations, unbalancing the ocean's yin and yang.

Some of the best examples of marine spatial planning for ecology are the networks of marine protected areas in many countries.

However, where conservation is not considered, developments remain relatively randomly spaced without thought for important principles of ecological connectivity. Marine feng shui is best supported by continuity and connectedness, principles that are crucial if our oceans are to continue delivering ecosystem services that we rely on, such as food provision.

Spatial planning relies on mapping to identify where and how the ocean is used in relation to natural resources and habitat. We now have the tools to do this at the large scale relevant to ecological processes.

At the most basic level, Google Earth provides a high-resolution picture of the built environment that can be translated for management. At a more advanced level, global observation platforms can generate

information about the earth's ecosystems with unparalleled detail. With these tools literally raining down information from above, we are now best placed to make important decisions to conserve the integrity of our oceans.

Offsetting our ocean footprint

We can look to principles already used in landscape ecology. In many parts of Asia, ecology is combining with the practical considerations for human habitation to create "healthy buildings" with natural temperature regulation, lighting and noise control. In fact, even strategies such as the Building with Nature program appear to have roots in feng shui.

With better planning and forethought about when, where and how we build into the ocean we can have more positive ecological outcomes. Encouraging multi-purpose developments, such as those increasingly used in aquaculture for economic benefits, could benefit ecosystems by constraining environmental impacts.

We can retrospectively feng shui built habitats with targeted conservation of threatened species, but also avoid building new structures in locations where they might impact on migrating birds, turtles or sea mammals. The spatial arrangement of structures might also be used to future-proof warming oceans and provide corridors of movement for ecological climate migrants.

Achieving all the necessary elements for good feng shui in our oceans will be difficult without investment in spatial planning and sustainable developments. Despite the global interconnectedness of our seascapes, their management is largely uncoordinated across territories and economic responsibilities remain uncertain.

What is clear is that our oceans are becoming a jigsaw of human-made

structures, but with ecological forethought we have the potential to fit these pieces together for the greatest benefits.

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