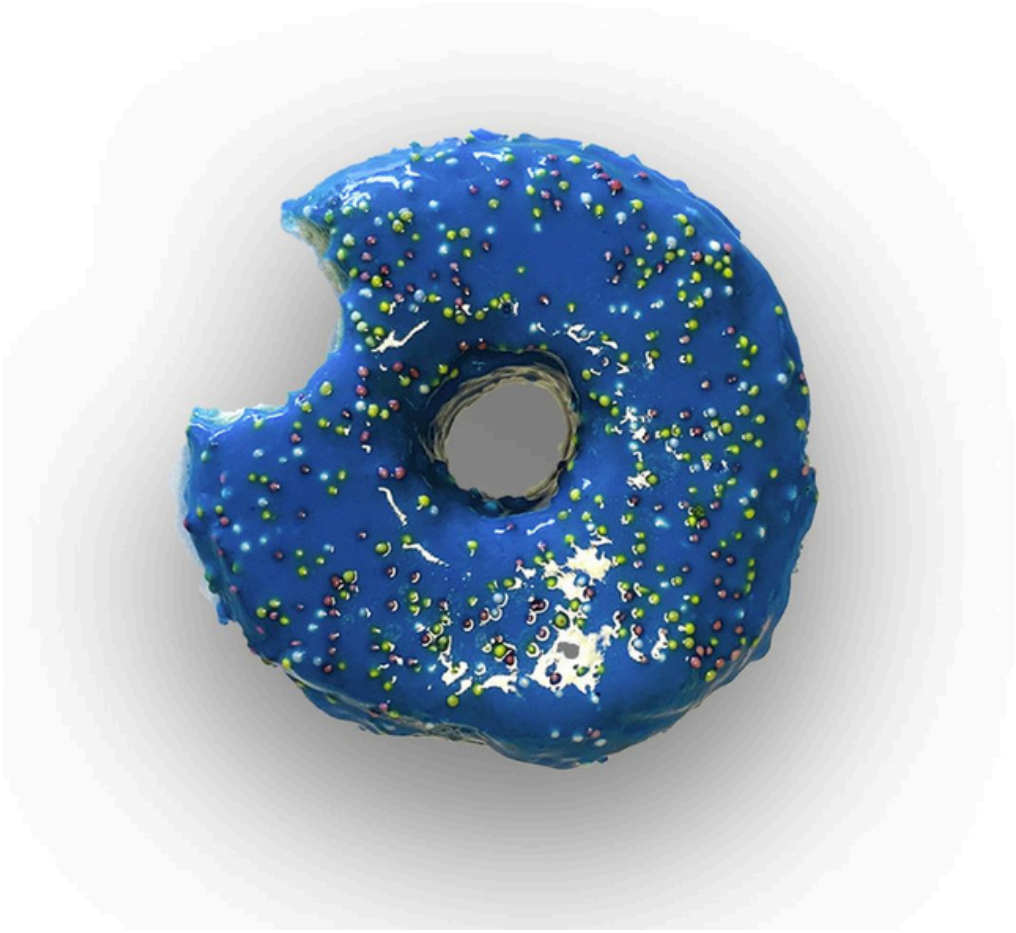
SEAS AT RISK



Towards a Blue Doughnut

A Blue Economy designed for the wellbeing of planet and people

DISCUSSION PAPER

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Work in progress

This is a DRAFT discussion paper. The Blue Doughnut model presented here does not claim to be finalised. It is a first working version intended to invite key stakeholders for discussion, exchange and feedback. It was developed with the help of two consultants: Louise Lieberknecht and Johannes Blatt.

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1. Blue economy beyond growth

Oceans in danger

Theocean, covering over 70% of the earth, is the world's largest habitat for wildlife and biodiversity. It is also our most important carbon sink and essential for the planetary biogeochemical cycles that provide us with the air we breathe and the water we drink. However, while the land-based economy hits its growth limits, the “blue economy” is heralded as a way to tap into additional profits. With ongoing overfishing, the boom of offshore renewables, shipping being projected to multiply over the coming decades, and the imminent threat of deep-sea mining, we are witnessing a dangerous “blue gold rush” moment, to the detriment of both planetary and societal boundaries. It is time to reframe the “blue economy”, before it is too late.

The problem with blue growth

Beingpart of the global economic system, the blue economy is designed to serve one ultimate purpose: growth of capital and monetary wealth. This growth is fully dependent on physical material extracted from the sea, on energy, on human labour, and on sea life. With limitless growth being the goal, the exploitation of nature and people is the inevitable operating mode of the blue economy. However, infinite growth on a finite planet simply does not work. Growth at any cost leads to acceleration of mass extinction, climate change, exploitation and toxication of land and sea. The collapse of ecosystems – and of stable, cohesive societies – is not a future threat, it is a reality happening right now. Future generations are depending on us to choose a better system that allows both people and planet to thrive.

EU “Sustainable Blue Economy“ missing the mark

The EU’s *Sustainable Blue Economy* strategy (European Commission 2021), along with the *European Green Deal*, intends to reduce the negative climate and other ecological effects of the blue economy. However, the ocean is still mainly considered as service-provider, as source of economic value, business opportunities, and jobs. The “sustainability“ aspect stems purely from a refocusing on new green technologies (renewable energies, innovations in shipping or aquaculture etc.) that are supposed to mitigate the negative climate and biodiversity impacts of the growing blue economy. At the same time, rapid ocean development remains at the core of the strategy. While green technologies are being rolled out (requiring their own growing resource input), the expansion of shipping, ocean energy production and tourism continues under the label of “Sustainable Blue Economy”. Meanwhile, marine ecosystem degradation, poor working conditions and social injustices in certain sectors of the ocean economy continue unchecked.

“Europe will not achieve its sustainability vision of ‘living well, within the limits of our planet’ simply by promoting economic growth and seeking to manage the harmful side-effects with environmental and social policy tools.”(European Environmental Agency: State of the Environment Report 2020).

An alternative goal: Thriving within boundaries

For a truly sustainable blue economy, thecentral goal of growth must be replaced by ecological and social well-being. A blue economy designed for planet and people:

- Serves the needs of people, not the other way around.
- Respects planetary boundaries and is designed to regenerate ecosystems.
- Measures progress in terms of the wellbeing of people and planet, not GDP growth.
- Preserves the planet, our common home, for future generations.

In other words: The *Sustainable Blue Economy* must provide for human needs within ecological limits.

2. Towards the Blue Doughnut

The Doughnut model

Doughnut Economics, crafted by Kate Raworth, is a promising alternative model that can be applied to the blue economy. The Doughnut is the core concept of this approach: "The Doughnut consists of two concentric rings: a social foundation, to ensure that no one is left falling short on life's essentials, and an ecological ceiling, to ensure that humanity does not collectively overshoot the planetary boundaries that protect Earth's life-supporting systems. Between these two sets of boundaries lies a doughnut-shaped space that is both ecologically safe and socially just: a space in which humanity can thrive." (Doughnut Economics Action Lab).

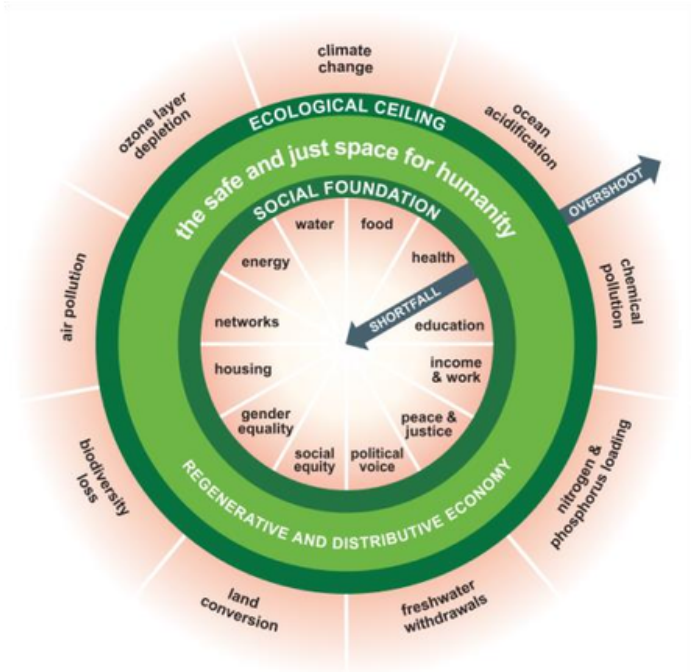


Figure 1: Doughnut developed by the Doughnut Economics Action Lab[1]

The Doughnut model clearly indicates that ecological sustainability and social justice are not separate goals to be traded off against each other. Rather, they are two sides of the same coin. A three-dimensional doughnut would show that the social foundation (representing human needs) and the ecological ceiling (representing ecosystem integrity) are not two physically separated circles, but one and the same surface. They are intrinsically connected.

[1] The Doughnut of social and planetary boundaries.
Credit: Kate Raworth and Christian Guthier. CC-BY-SA 4.0
Citation: Raworth, K. (2017), Doughnut Economics: seven ways to think like a 21st century economist. London: Penguin Random House.

Ecological damage is happening to a particularly high extent in places where economically disadvantaged people live. People in vulnerable situations also have lower capacities to protect themselves from the effects of ecological degradation. Thus, the destruction of ecosystems harms the socially unprivileged most of all. Furthermore, with the growing disparities in wealth and rising costs of living, a lot of basic human needs are unmet or under threat for many people today, even in wealthy nations. To a certain degree, overconsumption can also be the result of substituting the fulfilment of human needs by compensatory satisfaction. The social foundation combined with the ecological ceiling of the Doughnut forces us to reconsider what "meeting our needs" actually means, and to break exploitative patterns of overconsumption.

Radical transformation of our economy lies not in replacing human needs with nature conservation, but in replacing exploitation with care. Looking after human needs then becomes the same thing as looking after ecosystems: enabling all life to thrive on this planet in all its beauty and diversity. An economy aiming at the wellbeing of planet and people is therefore (socially) distributive *and* (ecologically) regenerative by design.

Developing the Blue Doughnut

Seas At Risks aims to adapt the concept of the Doughnut to the marine context in order to gain further insights for the ecological and social transformation of the blue economy.

The original Doughnut uses the framework concept of *Planetary Boundaries* to describe the ecological ceiling of the safe and just space. Seas At Risks suggests using the eleven descriptors of "good environmental status" set out in the EU *Marine Strategy Framework Directive (MSFD)* as a starting point for describing the ecological ceiling of the Blue Doughnut. However, two of the planetary boundaries with particular relevance for the oceans – Acidification of the oceans and Climate change – are not represented in the eleven MSFD descriptors, which could result in additional descriptors to the set of ecological boundaries.

Ecological Ceiling:

Good environmental status descriptorsof the Marine Strategy Framework Directive

1. Biodiversity: qualityofhabitatsand abundance of species.
2. Non-indigenous species:atlevels that do not adversely alter ecosystems.
3. Commercial species:populations within safe biological limits.
4. Marine food webs:atnormalabundance and diversity.
5. Eutrophication(nitrogen&phosphorus loading): ecological harm minimised
6. Sea floor integrity:structureand functions of the ecosystems safeguarded.
7. Hydrographicalconditions(physical characteristics of seawater): alteration not adversely affectingmarine.
8. Contaminants:atlevelnotgiving rise to pollution effects.
9. Contaminationoffishandseafoods: not exceeding levels established by relevant standards.
10. Marine litter:propertiesandquantities not harming coastal and marine environment.
11. Energy and noise:notadversely affecting marine environment.

For adapting the social foundation of the original Doughnut to the maritime context, Seas At Risk suggests departing from the *Blue Justice* framework (Bennett et al. 2021) which identifies ten social injustices that – experience shows – can be produced by a pure blue growth agenda. Again, when transferring the *Blue Justice* framework to the context of *Doughnut Economics*, certain elements of the catalogue of social standards might need modification. For instance, an issue which seem to be relevant in several sectors of the blue economy – maritime safety and fair working conditions – is not represented in the Blue Justice framework and its set of key social considerations.

Social foundation: **key considerations of Blue Justice (Bennett et al. 2021):**

1. Recognize and protect resource and spatial tenure and access rights.
2. Take a precautionary approach to reduce pollution and ensure that environmental burdens are not placed on marginalized populations.
4. Consider and safeguard the access rights and livelihoods of small-scale fishers.
5. Maintain and promote access to marine resources needed for food security and well-being.
6. Develop policies and mechanisms to foster and ensure the equitable distribution of economic benefits.
7. Monitor, mitigate and manage the social and cultural impacts of ocean development.
8. Recognize, include and promote the equal role of women in the ocean economy.
9. Recognize and protect human and Indigenous rights.
10. Develop inclusive and participatory planning and governance processes for ocean development.

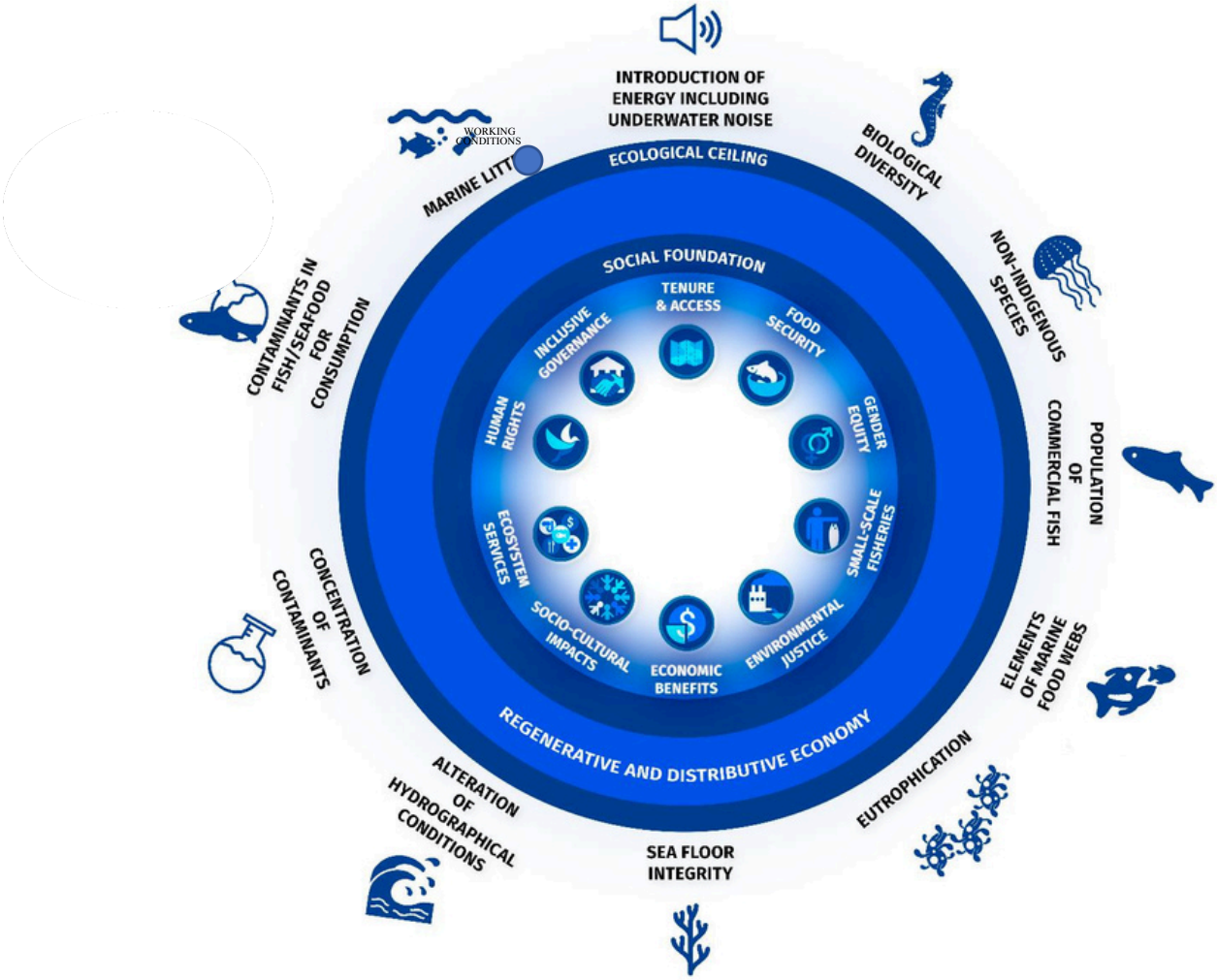


Figure 2: The Blue Doughnut – first attempt based on MSFD descriptors of Good Environmental Status and key considerations of blue justice.

Work in progress…

The Blue Doughnut is still work in progress. An in-depth conversation among maritime policy stakeholders is needed in order to get from the first draft proposal presented above to a sound and solid Blue Doughnut model. To what extent are the eleven descriptors of good environmental status (MSFD) and the ten key considerations of the *Blue Justice* framework adequate as a starting point? Which categories should be modified or added? There is also remaining work to do on developing measurable indicators for each ecological and social dimension, helping to assess at what point the blue economy is overshooting ecological boundaries or falling short of social justice requirements. The community of maritime actors is invited to contribute to the refinement of the Blue Doughnut model by giving feedback and advice in this process.

3. The Blue Doughnut as a tool for systemic change – a short guide for users

How can the Blue Doughnut be used as an analytical and strategical tool for redesigning the blue economy? Drawing on approaches of *Doughnut Economics,* this section presents four steps for applying the Blue Doughnut model to a particular realm of maritime policies. Each step requires good skills in systemic thinking. The Blue Doughnut tool shouldn't be applied without these skills and expertise.

Step 1: Defining the ocean place looked at

"Marine" issues are inseparable from the land-based economic drivers of human activities at sea, and the many downstream impacts of land-based human activities on the ocean environment. For example, so-called "marine" litter, "marine" pollution and "marine" plastic is almost always terrestrial in origin. Ocean-going industries (such as fisheries, shipping, minerals, energy...) ultimately serve needs and economic drivers on land. System change for the blue economy therefore has to encompass the entire economic system, land- and ocean-based. In a systemic perspective, a certain "ocean place" consists not only of a geographic place in the ocean that can be drawn on a map but also of the land-based network of human actors that connect specifically to that place.

Key questions for reflection:

- Where are the geographic bounds of the ocean locality we are interested in? • Who are the actors operating in that locality (or influencing it from outside)? • Who are the actors dependent on, benefiting from or impacted by the activities and ecosystems there?
- Where are these actors based?
- What are the land-based drivers for economic activities taking place in the ocean locality?
- What are the land-based downstream impacts on the ecosystems of the ocean locality?

Step 2: Understanding the system dynamics

The analysis of the complexities of the ocean place (step 1) already merges into the second step: developing a systemic understanding of the blue economy realm we are looking at. A systemic perspective appreciates the complex nature of system dynamics and the interrelatedness of issues such as nature conservation, climate, the economy of different sectors, social justice, cultural concerns and political questions.

Key questions for reflection:

- What are the major ***economic sectors*** in that ocean space, their issues, dynamics and interconnections?
- What ***social and cultural*** factors (identities, needs, cleavages) are important in that ocean space?
- What are the ***natural*** habitats and ecosystems, their geology and biology, their systemic dynamics and vulnerabilities?
- What ***values*** (economic, ecological, health, social, cultural, spiritual values) are attributed (by whom) to different system components in that ocean space?

- What **flows** of materials, energy and money are characteristic for the ocean space looked at and its wider system context? What value chains are involved? Who benefits from the flows, who is left out and who is negatively impacted?
- How does the ***governance*** of that ocean realm work with regard to both regulation and enforcement? Which instruments and mechanisms, approaches and incentives exist or could exist?
- Who are the most influential institutional and private ***actors*** in that ocean space? What resources do they have? What are their specific interests and needs, their conflicts, and power dynamics?
- What interactions, ***system dynamics*** and feedback loops can we observe between major elements of that system?

Step 3: Specifying ecological and social boundaries

The Blue Doughnut model applied to a specific realm of the blue economy requires a specification of the ecological ceiling and social foundation that mark the boundary between the safe and just space (where human needs are met within ecosystem boundaries), and the unsafe and unjust space beyond (where ecosystems are impacted beyond their carrying capacity, and humans are suffering from deprivation). Specific descriptors and thresholds warn us when the system is being pushed too close to these boundaries. These measures and benchmarks also help to understand overshoots and shortfalls within our particular 'ocean place of interest', and the footprint that our place has at the planetary scale. The Blue Doughnut as presented above may serve as a starting point for developing situation- and location-tailored descriptor and indicator systems defining ecological and social boundaries.

Key questions for reflection:

- What comprehensive and well-defined goals, descriptors and (qualitative and quantitative) indicators for ecosystem integrity and social needs do we have (or can we develop) with regard to our ocean place?
- How can we identify, map, monitor and describe the key shortfalls and overshoots within our place?
- What is driving these overshoots and shortfalls?
- How can we best communicate the place-specific and global boundaries of the safe and just space to key actors within or related to our place?

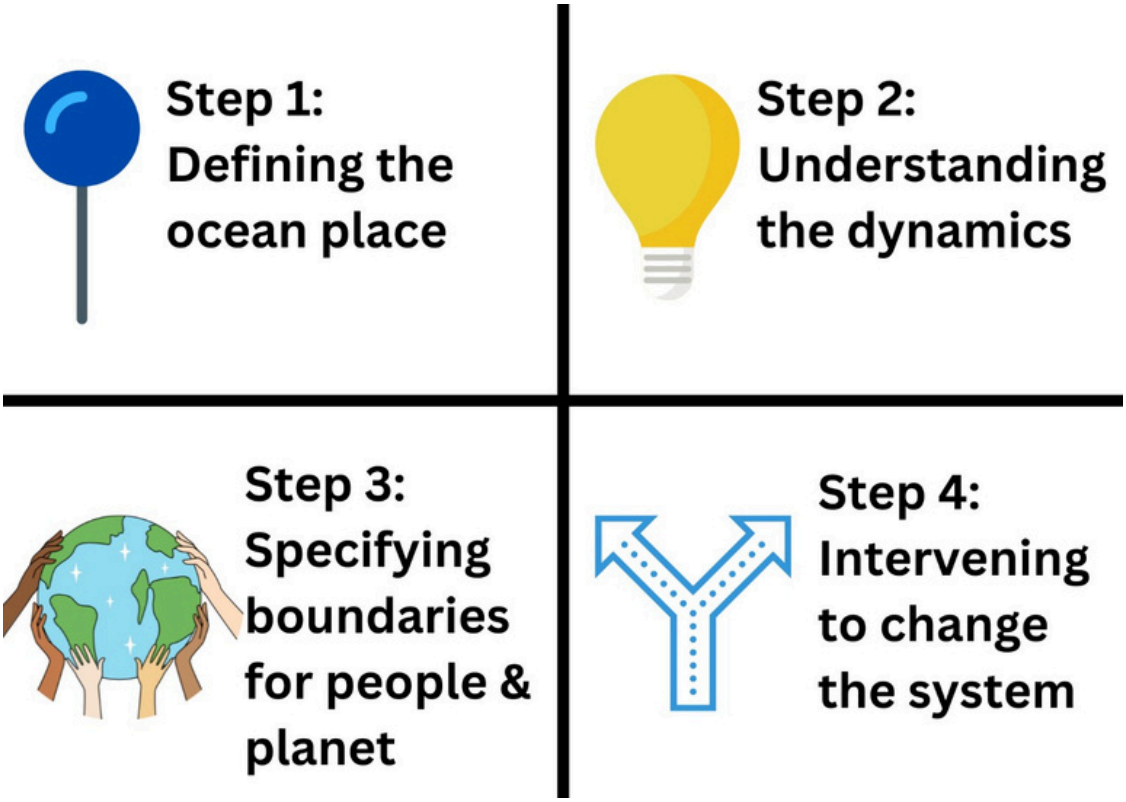
Step 4: Intervening to make the economic design regenerative and distributive

The last step encompasses the actions we take to make the blue economy system regenerative (of ecosystems) and distributive (of social benefits) by design. *Doughnut Economics* recommends looking at possible leverage points and interventions for systemic change through four different lenses: local-ecological, local-social, global-ecological and global-social. These four lenses reflect the necessity of meeting the basic needs of people and regenerate ecosystems *within* the place (two local lenses) at the same time as ensuring that the global footprint of the local economy supports social wellbeing and ecological integrity at planetary scales (two global lenses).

Key questions for reflection:

- How can this ocean place help bring humanity into the safe and just space (local-ecologically, local-socially, global-ecologically, global-ecologically)?

- What are the most impactful leverage points to focus on? What actions are we currently prioritizing? Do we need to redirect our focus? Are we creating the best possible
- communities of practice for our place? Who do we need to be working with to have the most transformative impact?
- *For environmental organizations:* Are we ensuring our actions are socially distributive? Are we considering whether our actions inadvertently create unjust consequences? Who can help us avoid this trap?
- *For social organizations:* Are we ensuring our actions are ecologically regenerative? Are we considering whether our actions inadvertently degrade ecosystems? Who can help us avoid this trap?



4. Transformative change in the blue economy – examples

A seaweed and shellfish farm in Wales – an example from fisheries

The Cân-Y-Môr seaweed and shellfish farm in Wales is regenerative and distributive by design: set up as a community benefit society it is owned by the local community. The farm started the first commercial seaweed and shellfish farm in Wales using a zero-input farming model, which avoids the use of fertilisers, pesticides and freshwater.

The farm practices "integrated multi trophic aquaculture" that grows kelp, scallops and oysters, regenerating marine ecosystems. It is a sanctuary and breeding ground for fish, contributing to the regeneration of local fisheries.

Cân-Y-Môr's innovative approach has stimulated jobs, given young people a route into the Welsh seafood sector and improved the coastal environment, the well-being of the local community and the local economy. It is a perfect example of a sustainable and community-driven economy that respects the environment, empowers people and contributes not only to increasing marine biodiversity but creates also local social and economic ecosystems, respecting both the ecological ceiling and the social foundation of the "blue doughnut".

www.carymor.wales

Low carbon sea transport on Marshall Islands– an example from shipping

Shipping is the most important economic sector on the Marshall Islands. Connectivity, especially for the remote islands and atolls, is vital for access to services and socioeconomic opportunities for citizens. People require imports by shipping for basic human needs for food, energy and housing. Reducing fossil fuel consumption of shipping is essential to mitigate climate & environmental impacts as well as costs.

In January 2021 the Marshall Islands purchased the cargo ship SV Kwai whose main propulsion comes from direct use of the wind. SV Kwai enables export of locally produced copra (a product of coconuts), delivery of food and consumer goods, as well as, transporting passengers inter island while reducing reliance on expensive of fossil fuels. Currently, the Marshallese government is working to launch a new built sail cargo vessel which has been designed with input from the local Marshallese community and is also intended to facilitate seafarer training.

The Low carbon sea transport project represents prefigurative practice to help transform shipping while leaving no one behind. It positively reflects all four impact dimensions considered by *Doughnut Economics*: local-ecological, local-social, global-ecological and global-social. This project is one of several sail cargo projects worldwide looking to create human scale zero emission trade and train seafarers for zero-emission shipping.

https://www.international-climate-initiative.com/en/project/low-carbon-sea-transport-17-i-306-mhl-g-low-carbon-sea-transport/

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