

UPDATE ON MSEP

- **Not in the same boat – the economic impact of Brexit on UK fishing fleets** <http://neweconomics.org/2017/11/not-in-the-same-boat/>
- **BLUE NEW DEAL Action Plan** – ‘Turning back to the sea’ <http://neweconomics.org/turning-back-to-the-sea/> and summary document: http://neweconomics.org/wpcontent/uploads/2016/11/BND_BULLETIN_E.pdf
- **MSEP legacy: A marine economics handbook for NGOs** http://b.3cdn.net/nefoundation/fd13ca36cea4cb53b7_xhm6b9tzq.pdf
- **The Infographic Impact Assessment for MCZs** <http://www.mseproject.net/infographic-ia> **MCZ summary & Methodology**
- **Poole Rocks MCZ** www.poolerocksmcz.uk <https://www.youtube.com/watch?v=68dly3ofgMU>
- **NEF Economics in policy making briefings** <http://neweconomics.org/2013/05/economics-policy-making/>

RELEVANT INFO

- **'Not in the same boat': the economic impact of Brexit across UK fishing fleets.** Few industries are as totemic of the UK's relationship with the EU as fishing. Since the Brexit vote, Ministers have made hyperbolic promises to the UK fishing industry that Brexit will deliver a “sea of opportunity”. But the new NEF [report – Not in the same boat](#)... – shows that as always, reality is more complex.
- **MarXiv** - The free repository for ocean and climate science <https://www.marxiv.org/> The site is just getting started so there aren't many papers there yet, but there will be soon. It's designed to give managers and planners free access to the science they need, which is usually otherwise hidden behind expensive journal fees.
- Conservation of European Flat Oyster will 'Greatly Improve' Water Quality & Biodiversity in the North Sea. Natural Capital Coalition. <http://naturalcapitalcoalition.org/conservation-of-european-flat-oyster-will-greatly-improve-water-quality-biodiversity-in-the-north-sea/>

EVENTS

- LAST CHANCE TO GET YOUR TICKETS FOR **COASTAL FUTURES** January 17th 2018 <https://www.eventbrite.co.uk/e/coastal-futures-2018-tickets-37243303724>
- **NEF consulting training events:**
 - [Creating a Theory of Change](#) - 23 January
 - [SROI Training](#) - 30-31 January (London) & 20-21 March (Manchester)
 - [Commissioning for Outcomes and Co-Production](#) - 8 February

- [Data analysis for social impact](#) - Feb 7th
- [Measuring & Improving Wellbeing](#) - 6 March
- [Measuring Social Impact](#) - 13-14 March
- Protecting the UK's Water Quality Tackling Pollution and Building Sustainability for the Future. 12th April <http://www.publicpolicyexchange.co.uk/events/ID12-PPE?ss=em&tg=1a>

PUBLICATIONS

- **No-take marine reserves are the most effective protected areas in the ocean**
 Marine protected areas (MPAs) are an essential tool for reversing the global degradation of ocean life. Hence, it is important to know which types of MPAs are more effective, and under which conditions. No-take marine reserves – the MPAs with stronger protection – are very effective in restoring and preserving biodiversity, and in enhancing ecosystem resilience. A new meta-analysis of previous studies shows that biomass of whole fish assemblages in marine reserves is, on average, 670% greater than in adjacent unprotected areas, and 343% greater than in partially-protected MPAs. Marine reserves also help restore the complexity of ecosystems through a chain of ecological effects (trophic cascades) once the abundance of large animals recovers sufficiently. Marine reserves may not be immune to the effects of climate change, but to date, reserves with complex ecosystems are more resilient than unprotected areas. Although marine reserves were conceived to protect ecosystems within their boundaries, they have also been shown to enhance local fisheries and create jobs and new incomes through ecotourism.
https://academic.oup.com/icesjms/advance-article/doi/10.1093/icesjms/fsx059/4098821#.Wdp3F_70Hgo.email
- **Ecosystem effects of invertebrate fisheries**
 Since the 1950s, invertebrate fisheries catches have rapidly expanded globally to more than 10 million tonnes annually, with twice as many target species, and are now significant contributors to global seafood provision, export, trade and local livelihoods. Invertebrates play important and diverse functional roles in marine ecosystems, yet the ecosystem effects of their exploitation are poorly understood. Using 12 ecosystem models distributed worldwide, we analysed the trade-offs of various invertebrate fisheries and their ecosystem effects as well as ecological indicators. Although less recognized for their contributions to marine food webs, our results show that the magnitude of trophic impacts of invertebrates on other species of commercial and conservation interest is comparable with those of forage fish. Generally, cephalopods showed the strongest ecosystem effects and were characterized by a strong top-down predatory role. Lobster, and to a lesser extent, crabs, shrimp and prawns, also showed strong ecosystem effects, but at lower trophic levels. Benthic invertebrates, including epifauna and infauna, also showed considerable ecosystem effects, but with strong bottom-up characteristics. In contrast, urchins, bivalves, and gastropods showed generally lower ecosystem effects in our simulations. Invertebrates also strongly contributed to benthic–pelagic coupling, with exploitation of benthic invertebrates impacting pelagic fishes and vice versa. Finally, on average, invertebrates produced maximum sustainable yield at lower levels of depletion (~45%) than forage fish (~65%), highlighting the need for management targets that avoid negative consequences for target species and marine ecosystems as a whole.
<http://onlinelibrary.wiley.com/doi/10.1111/faf.12165/abstract>

- **Planetary boundaries for a blue planet**

Concepts underpinning the planetary boundaries framework are being incorporated into multilateral discussions on sustainability, influencing international environmental policy development. Research underlying the boundaries has primarily focused on terrestrial systems, despite the fundamental role of marine biomes for Earth system function and societal wellbeing, seriously hindering the efficacy of the boundary approach. We explore boundaries from a marine perspective. For each boundary, we show how improved integration of marine systems influences our understanding of the risk of crossing these limits. Better integration of marine systems is essential if planetary boundaries are to inform Earth system governance.

<https://www.nature.com/articles/s41559-017-0319-z>

- **A big data approach to macrofaunal baseline assessment, monitoring and sustainable exploitation of the seabed**

In this study we produce a standardised dataset for benthic macrofauna and sediments through integration of data (33,198 samples) from 777 grab surveys. The resulting dataset is used to identify spatial and temporal patterns in faunal distribution around the UK, and the role of sediment composition and other explanatory variables in determining such patterns. We show how insight into natural variability afforded by the dataset can be used to improve the sustainability of activities which affect sediment composition, by identifying conditions which should remain favourable for faunal recolonisation. Other big data applications and uses of the dataset are discussed.

<https://www.nature.com/articles/s41598-017-11377-9>

- **Inequality in nature and society**

Most societies are economically dominated by a small elite, and similarly, natural communities are typically dominated by a small fraction of the species. Here we reveal a strong similarity between patterns of inequality in nature and society, hinting at fundamental unifying mechanisms. We show that chance alone will drive 1% or less of the community to dominate 50% of all resources in situations where gains and losses are multiplicative, as in returns on assets or growth rates of populations. Key mechanisms that counteract such hyperdominance include natural enemies in nature and wealth-equalizing institutions in society. However, historical research of European developments over the past millennium suggests that such institutions become ineffective in times of societal upscaling. A corollary is that in a globalizing world, wealth will inevitably be appropriated by a very small fraction of the population unless effective wealth-equalizing institutions emerge at the global level.

<http://m.pnas.org/content/early/2017/11/27/1706412114.full.pdf>



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- If you have any feedback about the newsletter or www.mseproject.net website or suggestions for improvements for 2018 please email chris.williams@neweconomics.org

- Also, If you have any research, articles or information that relates to socio-economic studies in the marine environment please share them with the network

Thanks, Chris @ NEF