Blue-Green Regeneration for Seaside Communities and Coastal Ecosystems: Renewal Principles, Priorities and Evidence
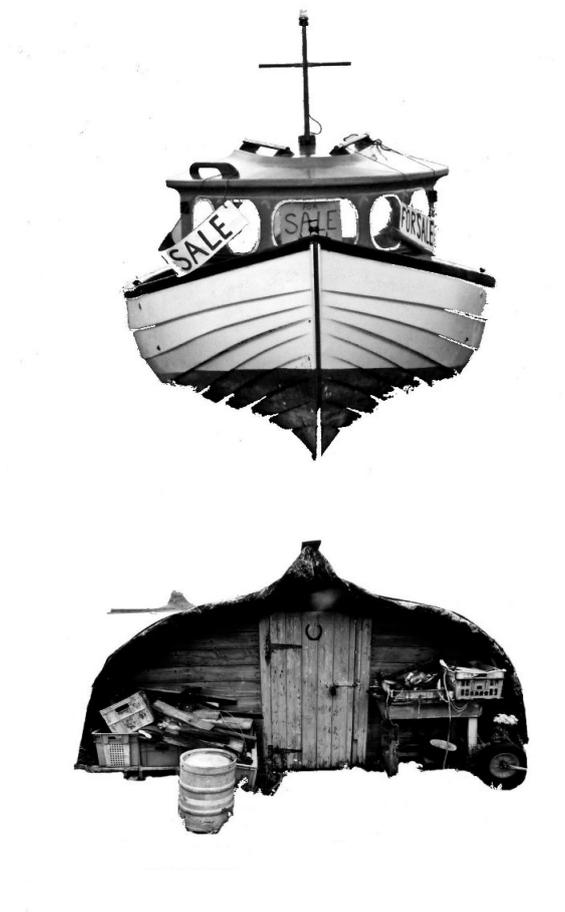
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Executive Summary

Both sea and land are threatened by the crises of climate change, ecological collapse, deepening social inequality, and growing population ill-health.

Seaside and coastal communities and ecosystems have been particularly ill-affected, and their economies long disregarded and forgotten by policy makers. New threats in the form of sea level rise, extreme weather events and warming waters are growing in importance.

Yet there is cause for hope. Blue-green regeneration brings a new focus on the value of healing whole systems at these margins of land and sea, forming new natural, social and cultural assets, engaging the public and citizens in new ways, and creating positive side-effects to advance a circular and low-carbon bioeconomy.

This evidence for hope comes from a range of place-based collective action and coastal partnerships, marine preservation and rewilding, and investments in transitions to greener economies.

We present examples of this "evidence for hope," and suggest that stories, support and appropriate policies can boost blue-green transitions that will help rebuild economic and social systems at all seaside and coastal locations.

We set out a route map for blue-green regeneration, and propose ten novel policy and practice priorities as the foundation for a manifesto for improvement at seasides and coasts.

Each priority will lead to the building of regenerative assets (combinations of natural, social, human, cultural and physical capital), as well as create new jobs and economic opportunity leading to improvements in human health and new forms of local democracy and collective action.

A Manifesto for Blue-Green Regeneration

A: Change Coastal Behaviours

1. Focus on the key components of the low-carbon good life in order to support behavioural choices to lower carbon footprints at the same time as increasing choices that improve health and well-being for all communities.

B: Engage Coastal People

2. Establish climate action committees and place-based partnerships at local levels in all seaside and coastal regions.

3. Ensure young people are engaged in setting out their hopes for the future in a network of youth and citizen assemblies at seaside and coastal settlements.

4. Develop citizen science projects to build broader public engagement for seaside and coastal regeneration.

C: Protect and Improve Coastal Environments

5. Designate marine protected areas (MPAs), marine national parks (MNPs), and no-take zones to ensure natural regeneration in seas and the improvements in fish stocks and communities.

6. Deploy policy to support the transfer of natural and land assets to local ownership in order to build engagement, creativity and greener economies.

D: Celebrate Coastal Foods

7. Ensure that natural resource-based foods are labelled and celebrated as part of sea foodsheds and foodways (such as the Cromer crab, Whitstable and Blackwater oysters, Brixham fish).

8. Transfer at least 50% of existing fish quota from industrialised fishing operations to small-scale artisanal fishers to boost the economies of small ports and towns.

E: Renew Coastal Energy Systems

9. Invest in and build renewable energy infrastructure to replace all fossil fuels and boost the green economy and jobs.

10. Retrofit existing housing stock and ensure all new housing is built to the highest standards of energy generation, use and conservation.

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Contents

This paper is an edited version of a keynote speech to the September 2022 Eastern Arc conference *The Collaborative Coast* held at the University of Essex. See https://easternarc.ac.uk/earc2022resources/. It draws upon papers and discussion at the conference.

1. The Types of Seaside and Coastal Locations

> "You know, in those days when we had the fishing,
> There was more kindness and generosity here,
> We travelled over the sea to other ports and seaside places,
> And came back with gifts and stories."
> Lowestoft fisherman and ex-skipper [in *Sea Sagas of the North*, Jules Pretty]

Both sea and land are threatened by four great interlocking crises of climate, inequality, nature loss, and ways of living that increase population ill-health. These have come to leave peripheral seaside communities and coastal ecosystems economically-vulnerable, increasingly unable to offer progressive and productive livelihoods for all, and in a state of long-term decline (NEF, 2017; CMO, 2021; EC, 2021; Standing, 2022).

Coastal communities have come to suffer from a number of intersecting problems. First, they have been the subject of many reports and commissions, and yet policy has appeared to have been unable to offer effective solutions to increase economic opportunity, equality and health outcomes. Second, sea level rise and warming waters are posing new threats to ecological systems and economic infrastructure. Third, they have suffered particularly from the structure of extractive national and local economies, which have not returned value to the people of the coasts.

As a result, coastal communities have some of the worst health and wellbeing outcomes in the UK, with a higher burden of disease, across a wide range of physical and mental health conditions (CMO, 2021; Di Cesare et al., 2022; Loughran et al., 2022). In these communities there are also higher rates of unemployment, lower levels of educational attainment and an ageing population. There is a complex link between health, the environment and the economy and an urgent need to improve the life chances within these coastal communities.

Coastal communities often are heavily reliant on traditional industry, and frequently rely on one significant employer to support the local economy. This offers little resilience to economic downturn or market-change. The long-term decline in domestic tourism and fishing industries has particularly impacted coastal communities, which have struggled to overcome economic setbacks (Thieme et al., 2022).

The poorest coastal areas on the coasts are also impacted by poor transport links and digital connectivity and under-investment. The distinctive architecture of coastal towns, a legacy both of the Victorian and Edwardian era and decades of economic decline, has resulted in a high proportion of poor quality and under insulated housing stock and a high volume of houses of multiple occupancy. This complex range of challenges facing coastal towns has a significant impact on individuals, communities and services. But coastal communities also have very significant human, physical and cultural assets, a strong sense of identity and place, and long histories of re-invention and adaptation (Casla et al., 2022; Tymkiw et al., 2022).

Coastal locations have rarely been treated by research and policy as being part of the same connected system. Different agencies, ministries and departments, different businesses and third sector organisations, tend to approach coastal locations with only narrow interests. This has resulted in the emergence of four major types of coastal settlement and location:

    i)   Fishing ports and villages;
    ii)   Seaside resorts and towns;
    iii)   Natural environments of marine, coastal and land ecosystems;
    iv)   Industrial container ports, ferry terminals, power stations and former industrial plants.

The history of interventions and support is unique and separated for each of these. Fish catch and quota policy and regulation rarely considers community benefits and equality of outcomes. Seaside resorts have seen widespread decline since the shift of tourism away from domestic locations to overseas. Natural environments are addressed and managed by completely different sets of statutory and third sector organisations that in turn rarely consider economic opportunities for coastal residents. In all cases, extractive economic approaches have resulted in economic, social and ecological decline, with negative impacts on human health and ecosystems (NEF, 2017; CMO, 2021; Standing, 2019, 2022; Clover, 2022).

These crises and locks are interconnected. Yet there are also huge opportunities for regeneration and renewal that could transform seaside communities and coastal ecosystems. One key challenge now is to find common principles for intervention that apply to all types of coastal community and ecosystem.
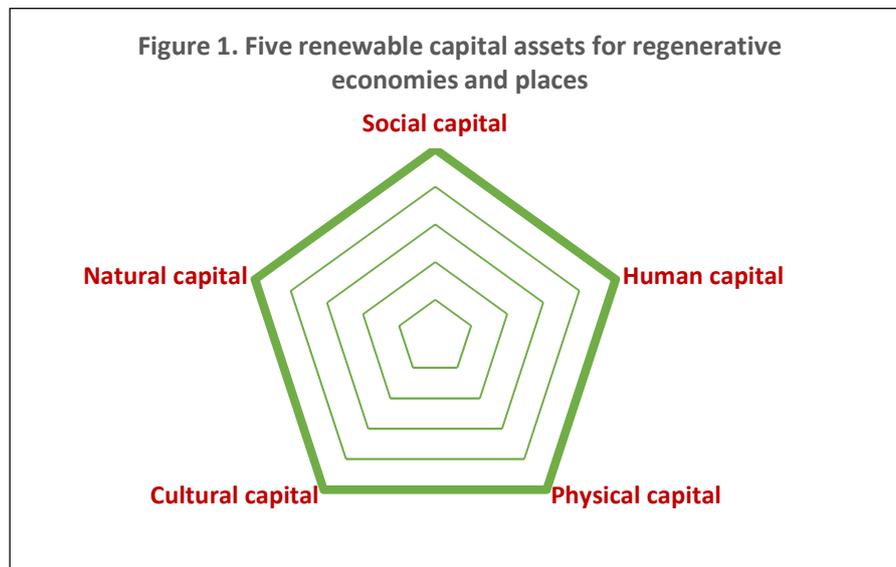
2. Principles of Blue-Green Regeneration

We define regeneration as the development and growth of five renewable capital assets which can deliver benefits and services that will improve the lives of the people of the seaside and coast (Putnam, 1995; DFID, 1997; Hawken, 2022; Essex Renewal Project, 2022; Pretty, 2023).

These five capital assets (Figure 1) are:

- Social capital: the trust, reciprocity and relationships that increase togetherness, kindness, connectedness and collective action between and within communities;

- Natural capital: stocks of natural resources in whole ecosystems (clean air and water, flood control, tree and soil carbon, and biodiversity) which provide benefits that underpin all economies and societies making human life possible;

- Human capital: the capability of individuals, based on knowledge, skills, health and nutrition, the value of which is magnified when these individuals in public, private and third sector organisations work together;

- Cultural capital: the local assets created by people that comprise customs, arts, language, stories, innovation, laws, science and technology.

- Physical capital: the human made resources and infrastructure of buildings, housing, factories, utilities, energy and transport infrastructure, and communication systems.

Figure 1. Five renewable capital assets for regenerative economies and places

Social capital

Human capital

Natural capital

Cultural capital

Physical capital

Note: Some models of assets include financial capital.

Blue-green regeneration is a simple idea: it is about building these assets in order to create regenerative and sustainable solutions suited to specific locations at the coast and seaside. This requires a new focus on healing whole systems on land and sea, forming new natural, social and cultural capital, engaging the public and citizens in new ways, and creating spill-overs and side-effects that advance a circular and low-carbon bioeconomy.

Yet in many locations, all five forms of these renewable capitals are now in a damaged and diminished state. Regeneration is a multi-functional and inclusive strategy that creates, builds and heals. It is intended to be inclusive and produce collective and committed effort. In the 2021 book, *Regeneration*, Paul Hawken and more than 100 co-authors have called for economic systems and structures that will heal rather than steal the future: "The economic structures created to support human well-being have degenerated life on earth, creating loss, suffering and a heating planet." At the same time, business leaders have begun to observe that it is not possible to have healthy people on an unhealthy planet, and that "businesses will grow and prosper over the long haul by serving the world – that is, by giving more than they take" (Polman and Winston, 2021).

This is the core of renewal: creating the context by which public, private and third sectors create more than they take. Securing renewal for all seaside communities means regenerating these five capital assets on the route to regeneration. The relationship between these capital assets is often synergistic, with improvements in one helping to foster virtuous circles of renewal for the longer term. Investment in one capital asset builds up and strengthens the value of the others.

Regenerative economic systems also tend to be multifunctional: their components do more than one job. For example, by investing in nature and people, and seeking to build assets that provide multiple services to all people, we can create a society with greater well-being and happiness, equitable distribution of prosperity and income, industry mindful to sustainability, and the re-imagination of living places with access to nature. These nature-based solutions (NBS) are a widely recognised term to draw attention to the services from natural assets that increase the well-being of people, as well as support unique and rich landscapes, habitats, and species.

The primary aim of any form of regeneration scheme or project should thus support the recovery and building of social, natural, human, cultural and physical capital across the region. These assets supply important services that benefit health, reduce public service costs and form a sense of public good. To achieve this, decision-makers across the public, private and third sector will need to listen to and learn from diverse perspectives, seeking out lessons from experiences that go beyond their own. This will help to create long-term change and opportunities for sustained renewal and health for the country (DFID, 1997; Dasgupta, 2021; HM Government, 2022).

Regenerative cultures also tend to be fairer and more equal, offering opportunities for personal growth for all people. High levels of public engagement are a social good, as this increases personal sense of agency and capability, increases creativity and grows problem-solving and entrepreneurial capacity. We see the engagement of the people of the coasts in renewal projects as a key part of future success. A regenerative future requires the capacity to listen and learn from diverse perspectives and ecosystems. It cannot be achieved by top-down policies or centralised control and decision-making.

In short, it may be asked, is a particular planned development activity extractive or regenerative? The latter form of regeneration is thus also about reestablishing collective hope, identity and pride.

3.   The Problems with Recent Policy and Practice

There have been over the past twenty years in the UK a series of reports, commissions and investigations into the state of seaside resorts and coastal communities (Table 1). The findings have been widely damning and yet the novel and effective solutions have been few. Many deploy the terminology of the edge and periphery. Yet for people who live in seaside and coastal communities, they do not feel on the edge of somewhere else. They define their places as home, and often have direct and common links to communities across seas (Niven, 2019; Macaulay, 2021).

The House of Lords Select Committee (2021) published 900 pages of evidence, yet was low on practical sources of hope and vision. It concluded that "seaside towns must reinvent themselves." This may be true, this may also be the centre absolving of responsibility. Either way, they need to know what a good future looks like. The *Levelling Up* White Paper (2022) identified a desire to redirect investment to forgotten places and economies, yet creates a competitive system focused on few winners. Fishing policy both within and outside the European Union has through choice resulted in the expansion of industrial-scale fishing at the expense of small-scale and artisanal fishers: in the

UK, 94% of fish quota is allocated to 15% of vessels, which only 6% is given to the remaining 4650 small-scale and artisanal vessels (Blue Marine Foundation, 2022; Clover, 2022). Across the whole of the EU, small fishers are permitted only 5% of the fish catch, yet provide 50% of the sea-based employment (EU Life, 2023).

In the Annual Report of the Chief Medical Officer of England (2021), seaside towns were described as "some of the most beautiful and historically important places, yet also some of the worst health outcomes in the country." The CMO presented evidence for a significant "coastal effect" on 17 health conditions, including on heart disease, strokes, diabetes, cancer, mental ill-health, dementia and asthma, recording higher incidence of each by 2-11% compared with national averages.

Table 1. Summary of two decades of reports, commissions and investigations into seaside and coastal communities in the UK

CABE and English Heritage (2002)	*Shifting Sands: Design and the Changing Image of English Seaside Towns*
English Heritage (2007)	*An Asset and A Challenge: Heritage and Regeneration in Coastal Towns in England*
House of Commons Select Committee (2007)	*Coastal Towns*
Coastal Communities Alliance: Walton and Brown (eds) (2010)	*Coastal Regeneration Handbook*
House of Lords (2011)	*Future of Seaside Towns*
Joseph Rowntree Foundation (2011)	*Impact of Climate Change on Disadvantaged UK Coastal Communities*
Coastal Communities Alliance (2014)	*Coastal Communities Toolkit*
APPG Coastal Communities	*One Coast*
New Economics Foundation (2017)	*Turning Back to the Sea: A Blue New Deal to Revitalise Coastal Communities*
Social Market Foundation (2017)	*Living on the Edge: Britain's Coastal Communities*
Government Office of Science and Foresight (2017)	*Future of the Sea*
Defra (2018)	*The 25 Year Environment Plan*
House of Lords Select Committee on Regenerating Seaside Towns (2019)	*The Future of Seaside Towns*
Chief Medical Officer (CMO) (2021)	*Annual Report: Health in Coastal Communities*
European Commission (2021)	*The EU Blue Economy Report*
HM Government (2022)	*Levelling Up White Paper*

Note: online location links for these reports are contained in the reference list at the end of the paper

Fishing communities have more in common with each other within and across countries that they do with physically nearby inland communities. This applies for seaside resorts, fishing ports and coastal ecosystems. The CMO further observed: "Coastal communities are not homogenous, yet do share many similar characteristics, which should help some common policy responses." The idea of systemic action is relatively new.

Many policy recommendations, however, resolve back to spot regeneration through investment in a single attraction or location that is supposed and expected then to transform a whole system. This might comprise an amusement park, art gallery, pleasure garden, pier, pool, theatre and casino. Each of these would be valuable additions to the assets of a seaside town, but rarely is full accounting deployed to assess whether such spot investments in one place result in other locations being excluded from investment opportunities and competitions. There can only be, for example, one new Eden Project (proposed expansion from Cornwall to Morecambe in the north-west of England); and there are several hundred seaside resorts in the country. The national investments in Coastal Community Teams, designed to promote regeneration, resulted in 140 teams having to compete for the same central pot of resource. The resulting awards are too small to lead to whole system change at each location. There can also only be a small number of container ports across the whole of the UK. Where spot regeneration becomes systemic, however, then transformations can be remarkable, such as on the Oslo waterfront in Norway, for Køge and Copenhagen in Denmark, and for many islands on the west coast of Scotland.

Further commonalities in these commissions and national policies include being low on how to use and prioritise public engagement to build social and natural capital; and low on connections to nature – how to deploy the value of natural capital to improve the well-being of people and communities. The problems are repeated over the years, yet rarely are extractive models and existing interests challenged to prioritise the development of local businesses. At the same time, a variety of third sector organisations have pointed towards the benefits of more connected approaches that build on local natural and social assets. These include from the New Economics Foundation, the Rapid Transition Alliance, Blue Marine Foundation, and Community Land Scotland.

4. On Hope

In the face of the great interlocking crises on climate, social inequality, loss of nature, and ways of living that make us ill, what kinds of language and values might we use to find our ways out of these deep woods? Berthold Brecht wrote in 1939,

> "In the dark times, will there also be singing?
> Yes, there will also be singing. About the dark times."

It strikes us that there is a need for new forms of story-telling, combined with a language of kindness and generosity. Kindness is both our common state and best response to threat (Zaki, 2021). It is selfishness that is the outlier (Bregman, 2020; Andersen, 2020).

The ecological collapse of the fisheries led directly to social and cultural change on the coasts, and people lost their friendships with others across the North Sea and eastern North Atlantic. We believe there is a need to develop stories and evidence about hope, and then find a way to use these to create greater and more effective agency to address the great crises of these times (Gersie et al., 2014).

At the start of his novel, *Greenvoe*, the Orkney author George Mackay Brown wrote of the way fishing brings people together. One fisherman of Greenvoe village lived in the row of cottages by the pier, his voice was of "an old seaman who had been sailing all his life; it was seasoned with Geordie and Scouse and Cockney and Clydesdale; a voice that belonged to the brotherhood of the sea." And next door, old Samuel returned with a basket of haddocks. Praise be, said Rachel his wife, as she strung three to four fish together, and took them to the neighbours.

> "We own nothing, do we," she said. "We must divide what is left, so there's nobody who won't have a little."
>
> Said Samuel, "That isn't business." She replied, "The miracle of the loaves and fishes is never done."

Rebecca Solnit in *Hope in the Dark* (2005) has observed, look not for hope in the limelight, but in the flickering shadows and margins. Hope is located in uncertainty, we do not know what will happen and so our actions matter. When you act with hope, you soon find others: hope helps move us from the individual to the collective (Macy and Johnston, 2022). We can be amazed by the peach blossoms on the far hill, and then work together to care for them.

Yet hope too requires some patience. Hope is a charged waiting, it is the force of grass pushing up through the pavement. It is life itself, and has its own eloquence. Hope is also getting up when we are knocked down. Waiting is not provisional time, it is life itself. And it can lead to cascades of change. When economies cease to seek growth at any cost, then stability brings the space for stories as a new currency. Listen to birdsong, and at the end the birds will still be there. Watch the moonway on the night sea, and the moon will come again. Listen to a story, and the words and guidance could carry you across the ages.

A story is a common, it expands with telling, with the song. We hear there is glamour in those mythic tales, even when the ends are known. The poet Gary Snyder (1979) wrote, "Stories keep us going," and the great Navajo storyteller Yellowman said, "If children hear stories, they will grow up to be good people" (in Hynes and Doty, 1993). Hope tales are thus inner journeys as much as external, shaped by outer events that readers or listeners will recognise. Something is at stake, and we learn from it.

There is clearly hope. Some coastal places have become greener and happier, partly as a result of courageous leadership. There is renewed pride. Others have rewilded farms and forests, created marine preservation areas and new commons, birds have returned to isles. Some have focused on increasing renewable energy capacity. When economies cease to seek growth at any cost, then stability offers the space for stories as a new currency. Listen to birdsong, and at the end the birds

will still be there. Watch the moonway on the night sea, and the moon will come again. Listen to a story, and the words and guidance could carry us across the ages.

This calls for a route-map. All good stories contain instructions for living. The characters show what is possible, if they open up to such a journey. "What I know is that a good life is one hero journey after another," wrote Joseph Campbell in *The Hero with a Thousand Faces* (1949). This will be the greatest journey ever undertaken, the one that lies before all of us. The economic system adopted and promoted by the affluent countries in the past couple of generations has breached Earth's boundaries. Infinite material growth seemed a clever idea, but on a finite planet it was never going to be possible (Kline, 2015, 2019; Jackson, 2009, 2021; Hickel, 2020; Dorling, 2021; Andersen, 2021). Much will have to change.

So: back to blue-green regeneration. There are some key themes.

Blue-green regeneration aims to bring a new focus on healing whole systems on land and sea, forming new natural, social and cultural assets, engaging the public and citizens in new ways, and creating spill-overs to advance a circular and low-carbon bioeconomy. Equally important, though, is the notion that people inside systems often do not know what is possible. This is where "evidence of hope" becomes important. The Rapid Transition Alliance (2023) has been saying: we understand the possibilities for regeneration, so we need to say what the future might look like. We need new stories of hope, new hope-tales.

An entirely new approach is needed for seaside communities and coastal ecosystems, one that builds on good practice and deploys regenerative thinking and principles (Wahl, 2021). This will require novel journeys of transition and transgression, and a new language of stories and evidence to prompt change. Some of these centre on the concept of the low-carbon good life (Pretty, 2023).

5. The Good Life for Regeneration

What does the good life look like today, and how might it tie into regenerative approaches to help prevent the climate, biodiversity and economy crises at the coasts? And at the same time make people happier and more content? The term *the good life* is widely used and has a generally common understanding (Brown and Harris, 2014; Syse and Muller, 2016; Fuchs et al., 2021). It suggests contentment and well-being, a life with meaning and a sense of purpose, a life good for us as individuals as well as for others, and implying doing good through trust, reciprocity and obligations for people and nature. It is seen as a key component of happiness.

The good life is translated, loosely perhaps, as *buen vivir* in Bolivia, Ecuador and Colombia, *buena vida* in Mexico, *hygge* in Denmark, *ikigai* in Japan, *haoshenghuo* in China, *kalyankari jeevan* in Hindi and Sanskrit, *felicida)d* in Spain, *bonheur* in France, *het goede leven* in the Netherlands, *koselig* in Norway and *Gemütlichkeit* and *das gute Leben* in Germany. It spans how we might feel at particular moments, say eating together or sitting cosily by the fire (*hygge*), and across a whole lifetime within a particular spiritual framework (*ikigai*). In the UK, *The Good Life* was the title for a popular 1970s TV sitcom, in which good for one couple was associated with not having things, suffering yet being

content, and good for their neighbours centred on high material consumption, yet they were constantly discontent. The good life was expressed as dramatic tension: how could anyone survive with enough and yet be happy? This is a central questions for regenerative approaches to development (Pretty, 2023).

The good life had Greek philosophical underpinnings, from Aristotle and the Stoics, where virtue implied good character, an intermediate golden mean (not too much, not too little), and a contemplative life. Stoics spoke of tranquillity, an acceptance of the transient nature of the world, a gladness in life, serenity and peace, and argued that rich luxuries were counter-productive to the good life. Both Aristotelian and Stoic traditions, though, were seen as accessible only for men of a particular social class. The *Tao Te Ching* contains observations on how best to live a long and contented life. Gary Snyder translated one phrase in this way: "The best things in life, are not things."

Since then the good life has reached national and policy level at only a few locations. In 1729, the Bhutanese realm observed that the first role of government should be the creation of happiness, leading in the 1970s to proposals about Gross Domestic Happiness as a replacement for GDP. The Buddhist term "right livelihood" has come to mean a good life, a living without causing harm to others, and resulted in the foundation of the Right Livelihood Award. China has stated that the good life is now the concern of the whole nation. And the good life known as *buen vivir* has been written into the national constitutions of both Bolivia and Ecuador.

Much environmental literature and recommended changes to behaviours and policy has centred on stopping bad stuff. Modern industrial economies had brought destructive side-effects, and actions were needed to stop or limit pollution, habitat destruction, over-harvesting, human ill-health. The good life remains partially about stopping material consumption, ceasing fossil fuel extraction, but more importantly the focus shifts to creating good activities and sustainable goods. The British poet Kathleen Raine wrote in *The Speech of Birds*, "It is not that birds speak, but people learn silence." The term "good life" has important contemporary salience.

In late 2020, a global online survey was conducted to seek to understand the elements of the good life. Responses came from 27 countries (see Pretty, 2023). The four most common choices were being in nature, healthy food, togetherness, and personal growth/learning (between 12%-21% of choices). These were followed by physical activity, spiritual and ethical coherence, and sustainable consumption (between 7-8%), with the five remaining categories below 3% each.

It is evident there is a link between the detailed components of the good life to health and well-being. It is well-established that being in nature improves mental and physical well-being. Healthy food from sustainable sources improves both personal health and sends market signals to farms about the importance of food production that increases biodiversity and ecosystem services. Greater social capital in the form of togetherness improves health and happiness, and members of social groups are happier than non-members. Regular physical activity increases health and wards off many non-communicable diseases, as does engagement with natural areas (Mitchell and Popham, 2008; Pretty and Barton, 2020). Personal growth is a key part of engaging with learning and new activities and skills. A coherent spiritual and ethical framework is seen by many as a wrapper for

meaning to life, giving further strength to choices and behaviours. Sustainable consumption improves well-being and satisfaction mainly through knowing, as people are acting in ways that do good for the planet (Fuchs et al., 2021).

Table 2 contains detail of the language and content of each of these 12 domains. An important observation from the findings on the good life is that 94.8% of the identified components are low in carbon emissions. Their adoption helps the transition towards a net-zero future.

The idea of the good life is, in short, an escape from the age of extraction towards building regenerative assets for all.

Table 2. Twelve domains of a good life for blue-green regeneration

Domain	Characteristics
1. Nature	Lying on the grass and beach; big skies; observing and watching nature; beauty; sensate; walking barefoot; open space and long views; sitting in sunshine; walking the dog; pets; healthy ecosystems; the view from home; flowers inside the home; surprise weather; camping; wild swimming; wildlife; chickens, smell of wet soil.
2. Nourishment	Healthy food; food as a gift; preparing, sharing and eating together; sustainable, local and own-grown; tasty; seasonal and fresh; treats; plant-based diets; avoiding highly-processed foods; baking and making cake, bread, yoghurt; supporting small farmers; table fellowship.
3. Togetherness	Trust; giving and reciprocity; sharing; gathering of friends and family; intergenerational contact; volunteering; listening to others; long-term partner, marriage; children; good conversation; circle of friends; the open fire; watching films together; wearing clothes made by friends; celebration & ceremony; community ritual & festival; visiting and sharing; singing and dancing with friends; attending meetings of protest and prayers; feeling valued; giving gifts.
4. Physical activity and mobility	Regular physical activity; walking, swimming, cycling, boating, gardening, hiking, fishing, skiing, hunting, running, yoga, sport, dance, tai chi; immersion in nature; public transport; electric vehicle and e-bike; no car; reduce and avoid air flights; exploration, discovery, novelty; visiting friends; slow walks; taking time; cleaning the home and do-it-yourself activities.
5. Personal growth	Learning new habits and activities; creativeness; play; active life of mind; making, pottering, tinkering, salvaging, sewing, carpentry; repairing things and goods; craft and art; learning all life; research, data; books; music – playing and listening; gardening – always changing; learning from culture; visiting museums; live theatre and music; charitable work; satisfying and fulfilling work; video games; stimulation; imagination.
6. Ethical and spiritual coherence	A purpose in life; ideological fulfilment in work; doing good; working for god; optimism; being part of something – social and natural; simplicity; silence, vastness; a path for life; mindfulness, meditation, prayer; spirits in land, water, animals; letting go of things; sharing the good life; relaxing; contentment, happiness; contemplation; accepting things as they are; tranquillity; nature as coherence.
7. Sustainable consumption	Cutting down material consumption; increasing sustainable and green consumption; light footprint; green and ethical choices; buying responsibly; getting rid of stuff; fix and repair; minimise waste, reduce pollution; no air travel; meaningful acquisition; green energy; shop locally; sharing tools and equipment; downsized living; recycling; things made by friends; quality possessions.
8. Enough income	Decent, regular and sufficient income; job security; financial security; not having to worry; affording comfort.
9. Good health and sleep	Good health; absence of disease; peacefulness at night; comfort; good work; meaningful life; not in pain; slow time; hope for future; refreshing sleep; holidays; inclusive well-being.

10.	Home and settlement	Quiet home; solitude; cosiness; sense of place; secure shelter; intergenerational community; comfortable home; living space of home and garden; cooking together; safe and accessible environment; not being too hot or cold; workspace.
11.	Supportive public institutions	Health and education accessible for all; public services; local businesses; affordable medical and social care; sense of community; good schools; good health system.
12.	Political freedom and trust	Trust in government; freedom of movement and expression; no fear of violence or poverty; free press and freedom of speech; responsible government; human rights; contemplative and caring polity; work that improves the lives of others; capacity to influence.

6. Evidence of Hope

Across the seaside communities and coastal places of the North Sea and eastern North Atlantic, there are cases of successful renewal centred on the principles of blue-green regeneration. These tend, however, to be islands of success, often not well known nor understood. Some have arisen locally, some as a result of progressive local or national policy. We call these "evidence of hope", as each offers and pathways towards wider regeneration across all seaside communities and coastal and marine ecosystems. This evidences of hope centres on redesigning natural, social, human and cultural capital and offer visions of low-carbon and more abundant futures (Walker, 2011; Gersie et al., 2014; Pretty, 2022).

No single example of blue-green regeneration is perfect, and there are many gaps. It would be, for example, technically straightforward to amend fish quota to benefit small ports and communities (Clover, 2022; Standing, 2022). But this has not happened. These cases illustrate important principles. Novel opportunities exist for building key capital assets, focusing on creating, making, healing, improving, and putting blue-green low-carbon living at the core. Rapid regenerative transitions are now the highest priority, moving us away from the last days of the age of extraction. Many now believe that new forms of economy are needed: post-capitalism (Mason, 2015), post-growth (Jackson, 2021), and embedded within planetary limits (Raworth, 2017). Perhaps, too, there are will be for new platforms for engagement, ownership and co-management, opportunities too for radical policy and practice (Klein, 2019; McKibben, 2019; Curry, 2019).

A central component will be public engagement, which can lead to the fast formation of social capital and the development of regenerative cultures, where natural, social and human assets are built. Christian Wahl (2021) notes: "A regenerative future requires the capacity to listen and learn from diverse perspectives." New forms of social design are needed (Walker, 2011). Deploying public engagement effectively does mean changes in both attitudes and mind. It implies generative patterns of practice, where creativity leads to new ways of seeing the world and acting in it.

The story is reframed through public engagement, and people are able to say, "We did it ourselves."

Old power is defined by central control and ruthless competition, by creating winners and losers, and by experts who hoard and protect. New power is defined by participatory combinations of many knowledges and worldviews, a sense of collaborative agency, calls to action to improve the world, and experts who share and facilitate (Timms and Heimans, 2018; Pretty, 2022). Citizen science

projects can be an effective means to increase local public engagement and creativity in developing new regenerative solutions (De Craemer et al., 2019; Fritz et al., 2019; Engage Britain, 2022; CSA, 2022; ECSA, 2022)

We feature here ten examples of successfully implemented hope from northern Europe. Each has begun its transformational journey in a different place. These include nature-based solutions and marine protected areas, the building of social capital through coastal partnerships, community festivals and stories for pride and identity, the creation of new ways of green living.

i) *The value of nature*: Húsavík village in northern Iceland was once called a speedbump on the road to other places, now is a whale-watching centre bringing in 100,000 people a year, with a vibrant local economy and culture (see Table 3).

ii) *The value of protection in the sea*: marine protected areas and no-take zones increase diversity and productivity of sea grass, kelp, oysters, fish and whales, increasing carbon capture at sea, and benefitting local economies on the coast, with innovative projects creating new regenerated commons in Sussex Bay, Lyme Bay, St Kilda, and the west Denmark coast.

iii) *The deployment of Nature-Based Solutions (NBS)* to create new ecosystem services, through rewilding seas and land: for example, beavers are acting as landscape engineers across many locations in the UK (including Devon, Essex, Kent, Isle of Wight, Nottinghamshire, Tayside), reducing flooding, keeping landscapes wet during drought, and thus increasing insect and plant diversity.

iv) *The importance of changing whole landscapes*, not small and separate pieces: in the upper Usk valley in Wales, landscape connectedness and green infrastructure is being built through innovative youth engagement and leadership, with the aim of forming an Usk bioregion drawing on its Welsh name (Wsyg) and fame for salmon, "running water full of fish".

v) *The importance of community ownership of land and other assets*: in the Highlands and Islands of Scotland, and flowing from the Land Reform Act (2003) and Community Empowerment Act (2015), some 400 assets are now in the sole ownership of local communities, including 27 estate and island schemes on 200,000 hectares, resulting in more jobs, housing renewal, renewable energy schemes, local food systems and growth in tourism income (Mackenzie, 2015; CLS, 2023) (see Table 3).

vi) *Building social capital through coastal partnerships* for new forms of collective action, for whole river/estuary change to increase coastal resilience and producing high economic returns, health and well-being benefits and more tourism income.

vii) *The cultural importance of community festivals*, art events, galleries and museums, which create pride, identity and local economic impact (Smith et al., 2022).

viii)   *The whole system transformation* of the Westmann Isles in Iceland after the 1973 volcanic eruption that destroyed 400 homes, resulting in regeneration of fishing, tourism, local culture around an electricity economy based on 100% renewables, including an electric ferry to the mainland and a local e-scooter scheme.

ix)   *The new city on the sea* of Isselmjeir: Almere in The Netherlands is a living experiment, comprising innovative design, community engagement, mixed neighbourhoods, urban food systems, nature access, walking and cycling routes, floating houses, community heat and power, and self-build wooden neighbourhoods (Wrathall and Clark, 1983).

x)   *The creation of the green-blue city* of Copenhagen, through investments in cycling infrastructure, harbour swimming baths and beaches, dockside and outdoor cafes, co-housing, accessible green space, local volunteering, incentives for electric vehicles, district heating, healthy food promotion: this produces $43m in saved health costs per year, traffic accidents and noise are down (see Table 3).

Table 3. Evidence of hope: three cases in greater detail

Húsavík, Iceland	Húsavík village in northern Iceland was once called only a speedbump on the road to other places, its fishing torn away by quota capture by the industrial boats. The whales of Skjálfandi Bay saved it. No one could conceive, at the start, that visitors would pay to travel on polished wooden ships to watch a whale. Now Húsavík attracts 100,000 visitors a year. At first there were only minke, now there are daily sightings of humpback, blue, fin, sperm and sei, plus orca and dolphin. The town has revived: a vibrant harbour quarter of cafés and restaurants, new hotels, a museum. And this: whales drive blue carbon capture. The whale pump creates diversity and productivity. At pre-industrial whale numbers of 4-5 million, they would capture globally 1-2 Gt of carbon annually. Numbers are rising, now 1.5 million. They are benefitting us all. The regeneration of this village is being spread in a new Fragile Communities initiative in northern Iceland.
Community Asset Ownership, Scotland	The Highland and Islands of Scotland were depopulated by deliberate clearances from the 1700s to early 1900s. Not long after devolution, the Scottish government signed the remarkable Land Reform Act of 2003, later followed by the Community Empowerment Act of 2015 (MacKenzie, 2013; CLS, 2023). Communities could now purchase with help from government and foundations whole estates and islands owned by absentee landlords. This has created a new movement of collective action organised around new commons – land and water producing social and natural benefits. There are now 400 assets in local ownership, including 27 whole estates and islands comprising 220,000 hectares. Communities have invested in housing renewal, renewable energy, local foodsheds, tourism infrastructure, and new forms of marine protection. The result: more jobs, attraction of new settlers, fossil fuel free systems.

Blue-green and happy Copenhagen	Copenhagen was once industrial, the air dirty, rivers and harbour polluted black. Today it is a blue-green city of hope: commuter cycle routes, outdoor activity, harbour baths and wild swimming, renewable energy schemes, green corridors and walks, harbour cafés and galleries. It is said to be the best bike city in the world. Traffic accidents are few, noise and air pollution down: each year, $43 million of health costs are saved by the city. Meik Wiking heads the Happiness Research Institute, and says the concept of *hygge* is at the core: it means togetherness, equality and gratitude, daily contact with nature, it is volunteering and feeling you have meaning in life. The aim, says Wiking, is "To change the story; how to make cities great, how to make them livable again." This has become a working vision for city-wide regeneration (Giradet, 2015).

7. A Manifesto for Policy and Practice: Ten Priorities

This evidence suggests there are a number of new policy opportunities and priorities for blue-green regeneration of seaside resorts and coastal communities and ecosystems. We set these out as a manifesto for blue-green regeneration.

Each will lead to the building of regenerative assets (combinations of natural, social, human, cultural and physical capital), as well as create new jobs and economic opportunity leading to improvements in human health and new forms of local democracy and collective action (Ostrom, 1990; Muradova et al, 2020; Fairbrass et al., 2022; Pretty, 2022; Citizens' Assembly for Ireland, 2023; PCAN, 2023).

A: Change Coastal Behaviours
1. Focus on the key components of the low-carbon good life in order to support behavioural choices to lower carbon footprints at the same time as increasing choices that improve health and well-being for all communities.

B: Engage Coastal People
2. Establish climate action committees and place-based partnerships at local levels in all seaside and coastal regions.

3. Ensure young people are engaged in setting out their hopes for the future in a network of youth and citizen assemblies at seaside and coastal settlements.

4. Develop citizen science projects to build broader public engagement for seaside and coastal regeneration.

C: Protect and Improve Coastal Environments
5. Designate marine protected areas (MPAs), marine national parks (MNPs), and no-take zones to ensure natural regeneration in seas and the improvements in fish stocks and communities.

6. Deploy policy to support the transfer of natural and land assets to local ownership in order to build engagement, creativity and greener economies.

D: Celebrate Coastal Foods

7. Ensure that natural resource-based foods are labelled and celebrated as part of sea foodsheds and foodways (such as the Cromer crab, Whitstable and Blackwater oysters, Brixham fish).

8. Transfer at least 50% of existing fish quota from industrialised fishing operations to small-scale artisanal fishers to boost the economies of small ports and towns.

E: Renew Coastal Energy Systems

9. Invest in and build renewable energy infrastructure to replace all fossil fuels and boost the green economy and jobs.

10. Retrofit existing housing stock and ensure new housing is built to the highest standards of energy generation, use and conservation.

8. Concluding Comments

The Nordic Council of Ministers in the recent report, *Towards a Nordic Well-Being Economy* (2021), called for new forms of cooperation to create "a green path for development", new forms of "the sustainable Nordic City", and a bioeconomy to increase jobs and improve the environment. David Orr of Ohio's Oberlin College, put the overarching challenge this way: "Now we have to learn entirely new things, not because we have failed in the narrow sense of the word, but because we succeeded too well... What must we learn? We must learn to embrace a higher and more inclusive level of ethics" (Orr, 2000).

Blue-green regeneration is already diverse, though largely locally-focused. It is being practised by cities, towns and communities, by third sector organisations and by some private businesses. It can often emerge as resistance against existing institutions and norms. Collective action and volunteering leads to better health and well-being (Borgonovi, 2008; Touchton and Wampler, 2014; Layard, 2020).

For many policy organisations, blue-green regeneration might look hard to implement. It undoubtedly means giving up some power and much certainty. If regeneration is to involve people, then their perspectives, ideas and views matter. They will change processes and priorities by being able to express wishes and wisdom, and thus help create new knowledges and boost economies.

Regeneration can then bring a positive premium. It changes minds, institutions and environments. It can lead to improvements for all people's lives in seaside communities and coastal ecosystems.

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