



Peat, Diesel and Seaweed

A Poetic Inquiry into the Green Transition in Northwest Highland Coastal Communities

This research has aimed to find out how people in coastal communities in the NW Highlands feel about climate change and explore their hopes for effective climate action. The project is a partnership between the University of the Highlands and Islands and the Northwest 2045 network of community organisations (hosted by Assynt Development Trust), funded by the Arts and Humanities Research Council to run from 2023. The three topics of peatland restoration, marine diesel and seaweed were selected with the partner as the research focus as they are issues with significant carbon emissions and/or sequestration potential in our area, but all relatively under-discussed. They are also all mostly hidden and distinctively aromatic.

The research began with a survey as a point of engagement of local people, then involved interviews with local and regional experts on peat and marine diesel, plus creative workshops, particularly involving young people, on peat and seaweed. Words and phrases from survey responses, interview transcripts and workshop data were used to write poems and other ‘poemish’ texts.

Key Findings Summary

- The starting point, revealed by the preliminary survey and reinforced in subsequent encounters, is that there is a deeply negative feeling around the issue of climate change and climate action, and a lack of hope, especially among young people.
- Peat bogs excite wonder and curiosity. Peatland restoration is underway and has huge potential in our area to stop some land-based emissions and turn them into absorption, thus contributing to net zero aims, whilst restoring a very special ecosystem and creating jobs for ecologists and digger drivers. The recent World Heritage listing of the Flow Country impacts the east of our area and could extend further into our patch. *This merits a skill-development focus.*
- The future of marine propulsion is renewable – electricity and hydrogen or ammonia – but our area is being excluded from the main opportunities in this sector, despite huge potential. Marine diesel is a major cause of our emissions, although there is a lack of transparency about marine diesel sales at our harbours and the vessels that burn it, many of which are French and Spanish. Offshore wind developments in our area and their electricity transmission and hydrogen production will by-pass our harbours, only benefiting the northeast and east coast. *This merits a campaign.*
- Seaweed is cool and could help us cool the planet - maybe a bit, anyway. Seaweed cultivation is being actively pursued by our communities and could offer some exciting opportunities. *This merits ongoing monitoring, skill development and research support.*
- Time travel generates hope and the sea is a time machine – this is the main discovery of the project, resulting from the development of a creative workshop method that has repeatedly seemed to turn despairing participants into optimistic ones. *This merits further research.*
- Poetry is an effective tool for distilling boring data (e.g. survey responses and interview transcripts) into something more digestible, and it can be sprung on people at community events, thus transmitting research findings to people who would otherwise miss out.

Introduction

This research aimed to find out how people in coastal communities in the northwest highlands of Scotland feel about climate change and explore their hopes for effective climate action. The project is a partnership between the University of the Highlands and Islands and the North West 2045 network (NW2045), a coalition hosted by Assynt Development Trust consisting of community organisations, local businesses, landowners and national agencies and non-governmental organisations with relevant local interests. It is led by a steering group of local community representatives, one from each of the area's seven community councils, which are the most local statutory democratic decision-making bodies in Scotland. This area, which covers about 3000 square kilometres and has a population of 3225 people (a population density of 1.1 person/km²), is one of the most sparsely occupied places in Europe, with a fragile economy and an accelerating problem of depopulation and demographic imbalance: the number of under 16s has reduced by 47% in the past two decades while the number of people more than 65 years old has increased by 45% (Biggar economics 2025). NW2045 was set up in 2020 to address the national imperative to achieve net zero carbon emissions by 2045, and began by creating a shared vision of how our region might achieve this 'green transition'. Our challenge is now to ensure that everyone in the community has a chance to have their say on what changes and developments should happen as part of this transition and for the views to be heard of as wide as possible a range of people. This research was designed to use creative methods, particularly poetic inquiry, in order to reach people, particularly young people, not often consulted in research projects, and to explore in depth some issues that were not forming the dominant subjects linked to climate change yet are likely to be significant locally. In the spirit of 'staying with the trouble' (Haraway 16), the research project intended to encourage people to express their concerns but also to dream about a better future. It was funded by the Arts and Humanities Research Council and ran for two and a half years from 2023.

The three topics of peat, diesel and seaweed were selected with the NW2045 team as the research focus as they are issues with significant carbon emissions and/or sequestration potential in our area, but all relatively under-discussed. They are also all mostly hidden (underground, over the horizon or below the sea surface) and distinctively aromatic! The phrase 'peat, diesel and seaweed' also has local resonance in two ways: 'Peat and Diesel' is a very popular rock band from the nearby Isle of Lewis, and one of the most famous poems by the poet Norman MacCaig, who wrote extensively about our area, described the smell on emerging from the Culag Bar in 1968 as the triad of 'brine, seaweed and fish' (MacCaig 2005). So 'Peat, Diesel and Seaweed' pays irreverent homage to these bastions of local culture, whilst also having a serious intent.

Peat is important because a large proportion of our land area consists of peat soils, some of them extremely deep and internationally significant: the eastern side of the area abuts the Flow Country, recently inscribed by UNESCO as a World Heritage Site (UNESCO 2024). Peatland is a major sink of carbon and capable of sequestering large volumes of CO₂, if healthy, but if damaged it emits potentially a lot of carbon. Peatland restoration creates an opportunity to turn a negative carbon balance into a positive one.

Diesel sales from our harbours are huge. Lochinver Harbour has the second highest fish landings in the country due to being the nearest UK mainland harbour to the North Atlantic deep sea fishery, thus being regularly used particularly by French and Spanish fishing ships to land their catches into large refrigerator trucks (which then drive the fish to France and Spain) and to refuel with diesel. We also have a small inshore fishing fleet and a substantial aquaculture industry (mostly salmon) as well as some recreational and tour boats. While there has been a lot of local discussion on reducing emissions from road transport, we urgently need a conversation about what the alternatives are to marine diesel use to enable boat propulsion using renewable energy sources.

Seaweed was chosen as a topic for research because the NW2045 has instigated exploration into a community-owned seaweed cultivation, harvesting and production business. Seaweed has the potential to replace some fossil fuel-derived materials, such as plastics and fertilisers, with substances that have smaller carbon footprints. A seaweed enterprise thus could offer local livelihoods as part of the green transition and it was hoped that choosing this topic would encourage people to include the ocean in their thinking about climate change.

Methodology

In order to attract people to research who might not otherwise engage we were keen to use creative methods so that the process of data gathering feels genuine and fun for those who contribute to it: a worthwhile end in itself, not merely a means to satisfy a distant research mill. As a writer, with multiple poetry collections, my preferred methodological approach to research is poetic inquiry (Leggo 2008; Faulkner 2020; Vincent 2018; Fernández-Giménez et al 2019). I have written about some of my approaches and rationales in a previous project, where I have used poetry in five different ways: as a way to stimulate participant engagement, as data, as an analytical method, as a reflection technique and for dissemination of research findings (Haggith 2021). In the Peat, Diesel and Seaweed project I used poetic inquiry in all five of these ways. I also used ‘rubber boots methods’ (Andersen 2023) including mountain and seashore group walks to engage young people and capture their words and expressions. Poetic inquiry has the benefit of producing findings in a form that are easily disseminated, being short, amenable to being read out and full of sound patterning and imagery that makes them much more digestible than standard research report prose.

The research began with a survey as a point of engagement of local people, then involved interviews with local and regional experts on peat and marine diesel, plus creative workshops, particularly involving young people, on peat and seaweed.

The survey aim was to invite people to engage in the project and to raise awareness of the questions and content we intended to explore, to gain insights into the emotions, ideas and action priorities of local people around the green transition, and to identify people for future follow-up. The survey involved 13 questions asking about hopes and fears around climate change, perceptions of the relevance of creative arts to climate action, specific action ideas around the three main topic areas (peat, diesel and seaweed) and other local priorities, as well as seeking demographic and contact information for people wanting further engagement.

Words and phrases from survey responses, interview transcripts and workshop data were used to write poems and other ‘poemish’ texts (Lahman et al 2019). Some of these are presented and discussed below and are also published elsewhere and available online (NW2045 2025; Haggith 2026).

We drew together relevant expertise from land managers, harbour users, scientists, local businesses and other community members, generating a body of source texts including interview transcripts, survey responses and specialist documentation (including a technical report about green hydrogen, chemical analyses of diesel, a feasibility study into a seaweed farm and a business plan for a local seaweed processing facility). For peat, I did three interviews with the chairman of a community landowner who is actively involved in peatland restoration, a conservation organisation’s land manager and a peatland restoration scientist, plus three creative sessions: a writing workshop with adults at a museum with a peat exhibition, an indoor/outdoor session with a group of teenagers, and a mountain walk with a group of adults. For diesel I did three interviews with the head of the harbour authority, a marine renewables engineer and a hydrogen industry consultant, plus creative work with

an organic chemist. The seaweed part of the study involved three creative sessions, one with adults as part of a seaweed farm consultation process, a day-long visioning and creativity session with young people and a poetry session on a beach with a group of school children. The interviews were mostly done online and were all recorded. Most events involving multiple people in person generated little bits of paper with words and phrases written on them. Altogether 72 people took part in one form or another, plus 35 people responded anonymously to an online survey.

The result of all this participation was a corpus of texts, plus some images. Workshop words were written on slips of paper with images of sphagnum moss for peat events and shaped liked seaweed fronds, sea shells, fish or waves for seaweed events. Some workshops involved the creation of a group visual poem using these paper slips and other images or paper artifacts. All the words written on these papers were typed up. All the interviews were transcribed.

This raw data was analysed by using it as the basis for found poetry in a range of forms, having fun whilst delving deeply into the nitty-gritty of these important climate change issues.

Findings

1. Survey results

The preliminary survey starting point, revealed by and reinforced in subsequent encounters, is that there is a deeply negative feeling around the issue of climate change and climate action, and a lack of hope, especially among young people.

Survey aim

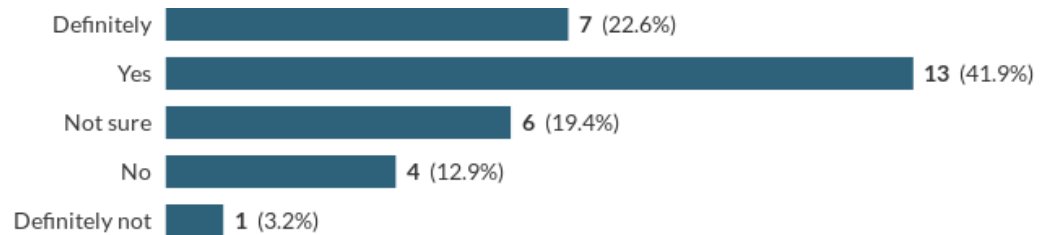
The survey aim was to invite people to engage in the project and to raise awareness of the questions and content we are exploring, to gain insights into the emotions, ideas and action priorities of local people around the green transition, and to identify people for future follow-up. The survey involved 13 questions asking about hopes and fears around climate change, perceptions of the relevance of creative arts to climate action, specific action ideas around the three main topic areas (peat, diesel and seaweed) and other local priorities, as well as seeking demographic and contact information for people wanting further engagement.

Responders

By the end of April, 31 people had completed the survey. 18 of these are in the target NW2045 area, 8 elsewhere in the Highlands and 5 elsewhere in Scotland. The biggest group (11) are from Assynt (as is the researcher). 77% of respondents are female (as is the researcher), 61% are in the 40-65 age bracket (as is the researcher) and no-one under 25 has responded yet, so seeking young input to the survey questions is a priority. 25% of respondents identified as 'being part of a marginalised or under-represented part of our society' and comments volunteered here referenced being a woman, a straight-white-male, a farmer, old age, Christian, Muslim and Asian heritage. 22 people gave an email address seeking further information about the project and/or climate change activity locally and 17 volunteered to be interviewed in this or future studies. This is clearly a classic example of surveys reaching the parts that surveys reach, and only those parts, as was anticipated and is the rationale for the other more creative methods used in the other stages of the project. Nonetheless it has provided food for thought and material for a first project poem.

Responses summary

Only one quantitative question was asked: ‘Do you think art, music, writing, crafts and other forms of creativity can help us to tackle climate change?’ Around two-thirds of participants feel arts are helpful.



The remaining questions were qualitative and participants in some cases wrote substantial responses: one climate change denier responded negatively or scornfully to all questions. The following is a brief summary of issues raised.

1. *Worst fears about climate change:* Many expressed fears about impacts on biodiversity and other species (polar bears etc). Meteorological impacts were mentioned by many (increased storms and floods, change to gulf stream etc) and several referenced sea-level rise. There were a few fears of social impacts, threats to human life, social cohesion and food insecurity or fears for future generations. Some people fear conflict and war.
2. *Hope from climate change actions:* Four people have no hope at all. Several people referred to inspiring role models, with Greta Thunberg getting the most name-checks. Many said community action and people working together is most inspiring. Reductions in fossil fuel use were mentioned several times. Tree planting and other nature-based activities were popular. Some mentioned technological progress. There were a few mentions of government action – legislation, taxes etc.
3. *Comments on the answer to the helpfulness of the arts:* A few people were completely sceptical – ‘nonsense’, ‘it’s too late’, ‘can’t see the connection’. Several thought it couldn’t actually change or generate action. But the majority of comments were highly positive: the arts can wake people up, change perspectives and outlooks, highlight issues, inform, connect, motivate, inspire, elegantly present facts and data, make a lasting impression, celebrate life, highlight beauty of the natural world, nurture connections, give meaning, tune us into the future, help us feel empathy, express horror, release anxiety, give hope.
4. *Priority actions on peat:* protect, restore, re-wet, block ditches, fell trees, stop cutting commercially, ensure money and funding, do smaller projects, work with people, educate and inform.
5. *Priority actions on marine diesel:* Sailing, electric engines, renewable energy, hydrogen, hydrotreated vegetable oil. Raise awareness. Reduce the number of boats, the amounts of consumption, fishing, travel. Impose emissions standards, fund emissions reduction schemes. Distinguish between big ships and small boats.
6. *Priority actions on seaweed:* A holistic approach that protects biodiversity; stop dredging and trawling to protect seaweed beds; create business opportunities - small-scale, community-based – for high-value products, food, fertilisers; link to heritage and the past; cultivate around wind farms and fish farms; need a lot of awareness raising and education.
7. *Other local priorities and views on these suggestions:* Several say these three topics are too limited in impact; a similar number say they are vital, exciting, massive, really important and top priority! Many say that small changes can lead to big impacts. There are repeated references to a need for local jobs and making more of our natural resources.

Discussion

In terms of the aims, the survey has linked some people into the project who we can work with further and the survey will remain open as a way for more people's views to be gathered as the project goes on and young people to be targeted. Insights from responses include, firstly, a heartening endorsement of the relevance of the arts at least as far as engaging with people, though there is some scepticism about the agency of arts in bringing about real change, which stands as an ongoing challenge to us in the rest of the project. Secondly, there is an interesting disparity between people who think that peat, diesel and seaweed are key issues and those who think their impacts are too minor, as well as many people who feel under-informed on these topics. Thirdly, and most strikingly, the first two questions provide a strong articulation of a broad range of climate change fears and a sonorous shortfall in hope, which have been delved into further.

The expressions of fears about climate change and the range of climate actions identified as offering hope were examined using a simple 'grounded theory' approach. This involves highlighting themes, particularly those that come up repeatedly. These were condensed into a poem, 'Pooling the Results'. The fact that four respondents said 'none' as their answer about hope seems significant and represents a kind of baseline of emotional response to the issue. Whether or not the project can address this hopelessness, it seems important to at least listen to and acknowledge this hollow note as our starting point. There are also a good range of more optimistic points for hope and the poem sets these in response to some of the fears expressed: the first phrase in each line is a fear theme, the second is a hope. The numbers in the poem refer to the number of responses in which the themes appear. The football scores riff seemed an appropriate way to use these frequencies and to articulate how fear and hope play off each other. Sonically it's a way to lay emphasis on those salutary answers of 'none'. My aim with this poem is to demonstrate to local people the kind of approach I can take to conventional survey data, bringing it creatively into a performable collective form, which I can share in the rest of the study to trigger further discussion about the emotional content of the green transition.

Pooling the results

| | | |
|---|---|-------------------------------|
| Polar bear fears, three | – | Hope, none |
| Fear of extinction of species, four | – | Hope, none |
| Storms and floods and sea level rises, five | – | Planting trees, three |
| Burning to death or ice age, two | – | Simple life, one |
| Food insecurity, two | – | Gardening, four |
| Mass migration, one | – | Technological progress, three |
| Conflict and war, two | – | Positive news, two |
| Inertia of government, two | – | Greta Thunberg, five |
| Suffering of vulnerable people, two | – | Hope, none |
| Climate denial, one | – | Hope, none |

2. Peatland restoration

Peatland damage is caused by overgrazing, burning, erosion due to foot-pressure from humans, livestock and deer, and drainage, which dries peat out and increases its vulnerability. In our region there are many areas of peatland that are not in good health, acting as carbon sources, but they can be restored by activity such as ditch-blocking, changes in grazing regimes, deer management and by carefully patching areas that have eroded, known as ‘peat hags’, with the sphagnum moss and other vegetation that enables them to absorb carbon. Such peatland restoration is expensive, but grants are available, and carbon that is absorbed by healthy peat has a value in carbon markets, so this creates a real local opportunity for employment, for ecological surveyors and skilled digger drivers, for example, in taking active steps towards our green transition to net zero.

To explore peatland restoration, I carried out interviews with three local experts actively involved in different aspects of the topic. One was the chair of the board of Assynt Foundation, a community owner of around 20,000 hectares of land, including the mountains of Canisp, Suilven, Cul Mòr and Cul Beag, where peatland restoration is already underway. The second was the manager of an estate owned by the John Muir Trust, a national conservation body, which has been exploring the options for peatland restoration on the slopes of the mountain Quinag. The third was a scientist who focuses on peatlands, who has been central to the world heritage listing of the Flow Country in Sutherland and Caithness. These interviews were free-flowing conversations that began from a set of open-ended questions. They were recorded and transcribed and then I used a process called ‘Surrender and Catch’ (Prendergast 2015) to gather words from the transcripts from which I created poems. The poems below use only the words of the interviewees.

The poem ‘Peat is Breathing’ comes from a researcher who uses satellite measurements to assess the health of peatland. When healthy, there is a large change in height (due to water absorption) between winter and summer, as if the bog is breathing. Damaged peatland has much shallower ‘breaths’. The poem ‘Gulley Blocking’ emerged from the realisation that the interviewee used similar language (‘erosion’, ‘building’ and ‘healing’, for example) to describe both social and environmental changes, something he hadn’t noticed until he saw the poem. ‘Reductionism’ is another example of an expert linking ecological and cultural recovery and identity, and showing how this can be a guide towards hope.

Peat is Breathing

(with thanks to Roxane Andersen)

We need to talk about Peat.
Not Lewis, Tony, Colin or Simon,
it’s Peat – we absolutely must
do something. Now.

Peat’s not dead you know.

Peat's very much alive,
breathing, very slowly,
but you can watch their body

swelling and shrinking, swelling and shrinking,
ups and downs like a heartbeat.
If they're healthy they can breathe deeply,
the amplitude of those movements is really big.

When Peat's less healthy, like now,
the breath is more shallow,
it's stiff,
it's lost that elastic capacity.

Peat's completely underappreciated.
A lot of it has been the language
that's been used to talk about them
for a very long time – poor, empty, dangerous, smelly...

but imagine if we can turn that on its head,
see the beauty, the uniqueness,
the really cool things in Peat,
maybe that will change.

Peat's amazing. Peat can help us
to go back into our past
and to understand our future.
Even the oceans depend a little bit on Peat.

I love Peat.
I want everyone to love Peat.
We need Peat
to keep breathing.

Gully Blocking

(with thanks to Lewis MacAskill)

It's a bit of a helter-skelter,
gullies continually scouring out
washing peat and soil away down the hill.
Some of them are fifteen or twenty feet deep,
rivers running down off the top of the mountain
in the worst winter weather.
See the forces of the elements when the water's racing.
The hags are huge
and the washing out is more prevalent
and erosion's increasing
because we're getting more and longer spells of rain.
The sheep and deer grazing didn't help,

left large areas degraded, washed out, in poor shape.

We've a problem with culture, with identity.
Kids who grow up here are different to other kids.
It's a unique place. We've got folk
from all four corners of the UK and beyond
but you go into the school playground
and there's no-one speaking with an Assynt accent.
It's a bit brutal. Song and spoken word
was really important, but it's eroding and we're struggling.

When I was a young graduate forester
we had all these guys ploughing up and down the hills.
We're living with a legacy of all these bloody plough furrows
that washed everything away.
I'm having to go back in and repair work
that I thought was a good thing all those years ago.

We're building dams and bunds
to slow the water running off the hill.
It's still flowing, but slowing
allows the peat to stabilize.
Things recover: more plants, more photosynthesis,
more flowers, more insects, more birds, more life.

There are opportunities here: good jobs, good money.
We need guys and girls on the ground:
ecologists, bird people and digger operators.
We're building dams and building knowledge.
We're blocking washed out peat gullies,
bringing in new streams of revenue.
Just stopping emitting carbon isn't enough.
This goes beyond locking it in.
It's about making the land and community healthy,
so moss grows over the scars.

Reductionism

(with thanks to Romany Garnett)

A really positive thing to do with the climate change question
is not to reduce it to some sort of chemical formula
or something you can put in a spreadsheet and account for.
Leave it in its beathing, living environment.
Understand that it is something bigger, more spiritual.
Allow nature to teach us: it will have a way of healing itself.
Hope is a wonderful thing: it makes things happen.

If we reduce ourselves to carbon emitting machines
sitting in front of screens
then we do exactly the same

as reducing the bog to something just chemical.
A bog is not a flat, dead, empty expanse of carbon.
If you have that narrow view you miss

the greenshank, the dragonflies and frogs,
the sheer beauty of a bog asphodel flower.
The closer you look the richer it is:
sundews, bladderworts, butterworts,
exquisite little flowers,
sphagnum moss,
purple sandpipers and golden plovers,
damselies dipping for a drink.

Temperatures rising is really scary.
I swing from extreme anxiety – why aren't we doing more? –
to complete apathy – what the hell, we're going to die anyway.
I feel guilty too.
But I've got a great belief in the earth being able to look after itself
and there are pockets of people tackling things
on a local level, regaining identity.

You can't really care for the planet
if you're struggling with your own concerns.
We need songs and stories and laughter,
joining together, having a good time.
We're beautiful too.

Be Wary

(with thanks to Romany Garnett)

If there's been heavy rainfall
bogs are difficult places,
intricate pool systems,
surprisingly deep.

Each footstep sinks in.
And when the mist comes down
bogs take no prisoners.
You have to be really wary.

You can't just blasé your way through.
They'll get you!

I also ran three events to gather views about peatlands and restoration from other people. One was with a group of 'junior rangers', school students aged 12-14 with an interest in learning outdoor skills. This was run indoors and briefly outside on a filthy, wet day at Glencanis. The lack of hope expressed by this group was particularly powerful: when asked to write on a paper slip how they felt about climate change, one, in almost microscopic text crammed 'bad' into one corner, leaving the rest blank; another wrote 'death'; one simply drew a skull; and other words used were: despair,

confusion, angry, sad, hopeless, helpless, catastrophe, guilty, poisoning, scared, depressed, annoyed, and 'it's insane that we have done this to our only home'. This is consistent with other research about the high levels of climate anxiety among young people (Hickman et al 2021).

The second was a walk on Quinag, advertised to the general public as a guided creative walk, which was on a blistering hot summer day so dry the moss was crispy underfoot. The third was in a museum at St Andrews (so, strictly speaking, outside of the project area) where there was an exhibition about peat. During these events, participants were invited to write words on little slips of paper showing a frond of sphagnum moss on one side. Some of the words and phrases they wrote were used as the basis of a poem 'Bog', which begins to capture how much peat bogs excite wonder and curiosity. There are more words from these events that are yet to be distilled into poetry.

Bog

If I go too far
I will dissolve into the bog
I will soak through
I will sink in
You will find me sleepy and sodden
You will find me buried below
Under the carpet of capitulum-headed fronds
Inside the deep damp softness
Becoming water
Squelching when you stand too close
Shuddering when you touch me
Be careful with your tools, your tairsgear, your tractor tyres
I found the earth dreaming here
I found her breathing.

3. Marine diesel alternatives

Diesel sales from our harbours are huge. Lochinver Harbour has the second highest fish landings in the country due to being the nearest UK mainland harbour to the North Atlantic deep sea fishery, thus being regularly used by particularly French and Spanish fishing ships to land their catches into large refrigerator trucks (which then drive the fish to France and Spain) and to refuel. We also have a very small inshore fishing fleet and a substantial aquaculture industry (mostly salmon) as well as some recreational and tour boats. While there has been a lot of local discussion on reducing emissions from road transport, we urgently need a conversation about what the alternatives are to marine diesel use to enable boat propulsion using renewable energy sources.

This topic was also explored through three interviews with experts: a senior figure in the harbour authority for the Highlands (who unfortunately has been off sick since the study, so has not been able to approve his poems, so he is unnamed below); an academic engineer with specialist knowledge of renewables and marine propulsion; and an expert on hydrogen from the private sector. Again, the interviews were recorded, transcribed and words and phrases selected from the transcripts to create poems.

The first poem 'Joining the Dots' arose by noticing the 'produce, produce, produce' phrase used by one participant and wondering what other words were repeated by interviewees. The poem uses only words or phrases that are used at least three times, and serve to condense out some of the issues

considered key in the marine energy debate by these experts. Sequencing them in this way enables a narrative of change that to be articulated, drawing together (joining the dots between) the points raised by all three experts to provide an emphatic summary of the steps we need to take to get beyond diesel in the marine environment. ‘Stink’ emerged from noticing the slang expressed ‘go like stink’, meaning ‘go fast’ and pairing that with the other smells referred to in the interview, which raise some important issues and a clear ‘recipe’ for the shift away from diesel. The other poems are exercises in form using the chemical formulae for diesel as the basis for choosing words from interviews with particular numbers of syllables, treating these as ‘atoms’ and creating poetry ‘molecules’ from them.

Joining the Dots

Colin says it’s all ‘produce, produce, produce’,
when we really should be ‘efficient, efficient, efficient’.
Tony says ‘electric, electric, electric’
and Simon says ‘before the meter, before the meter, before the meter’.
Everyone says ‘wind farm, wind farm, wind farm’
and ‘hydrogen, hydrogen, hydrogen’.
Simon and Tony say ‘ammonia, ammonia, ammonia’.
Simon says ‘refuelling stations, refuelling stations, refuelling stations’
while Tony says ‘big tanks, big tanks, big tanks’.
Tony asks about ‘infrastructure, infrastructure, infrastructure’
and when Simon says ‘cost, cost, cost’
Colin says ‘tax breaks and incentives, tax breaks and incentives, tax breaks and incentives’
and Tony says ‘investment, investment, investment’.
Colin and Tony say ‘ferries, ferries, ferries’,
Simon and Tony say ‘fishing vessels, fishing vessels, fishing vessels’.
Colin says ‘tides, tides, tides’
and Tony says ‘yacht, yacht, yacht’.
Colin and Tony say ‘companies, companies, companies’,
and Tony also says ‘government, government, government’,
while Simon adds ‘communities, communities, communities’.
Colin says ‘design, design, design’
Tony says ‘jobs, jobs, jobs’,
Simon says ‘skills, skills, skills’
and I hear ‘dot, dot, dot...’

With thanks to Tony X (Highland Council Harbour Authority), Colin Risbridger (UHI Orkney) and Simon Nesbitt (Mott MacDonald), from interviews with whom these words were taken, as part of the ‘Peat, Diesel and Seaweed’ poetic inquiry into alternatives to marine diesel in the Northwest Highlands of Scotland.

Stink

To step away from diesel is not going to be easy.
Blue and green hydrogen might be an alternative,
but it would need a big, heavy tank.
Big ships are physically more able
whereas small boats, creel boats and yachts,
need to look at electric.

Put a little wind generator on your vessel

and a solar panel, super-reliable –
you know exactly how much light you're going to get.
All the ballast in the keel could be batteries.
Rip out the engine, get a tesla motor bolted in, connect it to the shaft
and it'll go like stink.

Talking of which, another fuel is ammonia.
It's not a very nice gas, not something you'd want to breathe in.
The old Lochinver ice-plant's refrigerant used to be ammonia.
I couldn't breathe in there, would never go in.

But electric's a good solution.
They're looking at it for ferries.
There'll be designs, there'll be construction jobs, lots of call for electricians.
Somehow we've got to cut emissions - climate change is happening.
The future's coming.
It's going to smell strong.

With thanks to Tony X (Highland Council Harbour Authority) from an interview with whom these words were taken, as part of the 'Peat, Diesel and Seaweed' poetic inquiry into alternatives to marine diesel in the Northwest Highlands of Scotland.

Diesel poems

A diesel poem, based on $C_{11}H_{23}$ represented as pairs of one-syllable words with a 4-syllable word between them and one solitary H before the C at the end. All these words come from interviews as part of the project.

hooked on
hydrocarbons
pushed by
capitalists
sold by
oil-industry
jagged through
leaky-pipelines

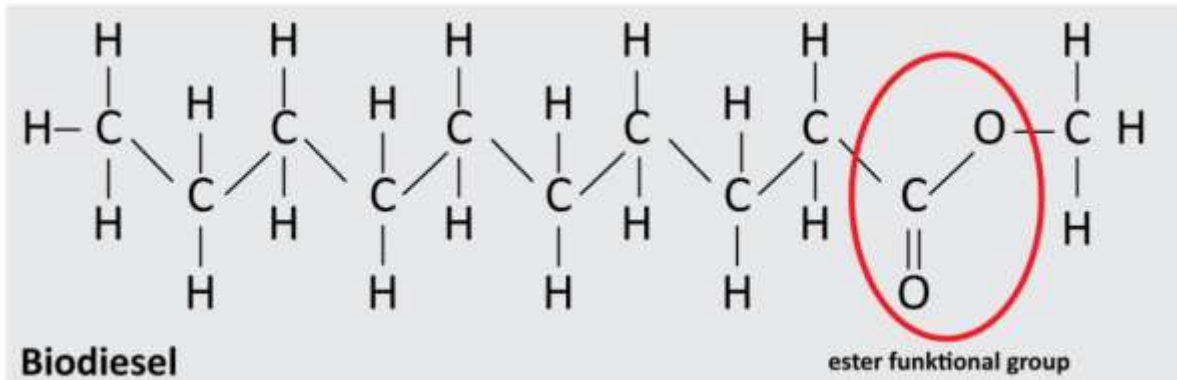
so much
greenhouse gases
too hot
high-emission
high-risk
particulates

must halt
supertankers
give up
fossil fuels
don't use
petroleum

next fix?

biofuels
stop!
dependency

Two poems based on $C_{11}H_{22}O_2$ interpreted as 11 4-syllable words, 2 2-syllable words and 22 1-syllable words, linked according to this molecular diagram.



Why
does combustion seem
so necessary to
us? Petroleum has
caused revolution and
this climate-changing hell.
Our politicians make
such inadequate laws.
False expectations. They're
just comedians, just
perpetuate
crisis
Instead?
We're transitioning to
hope.

Can
we decarbonise our
lives? Regulations could
make agriculture much
more sustainable, our
food deliciously free
from guilt-inducing peat,
and especially meat.
Less transportation and
more vegetables. It's
a problematic world.

Industrial
palm-oil soya
don't definitely solve
it.

The north west has very poor infrastructure for electricity and limited onshore renewable energy generation, and there are no plans for alternative energy developments in the harbours. The West of Orkney offshore wind farm, which is actually North of Sutherland, will not be wired into any of the north west harbours; instead all the cables will run east to Scrabster. A representative of this wind energy company agreed to be interviewed for this study but twice failed to appear at agreed times. The biggest diesel purchasers from our harbours, French and Spanish fishing companies, whose hauls from the north Atlantic give Lochinver the second-highest fish landings in the country, were not willing to be interviewed as part of this study.

Yet it is clear from all three experts that the future of marine propulsion must be renewable – electricity and hydrogen or ammonia – so it is worrying that our area is being excluded from the main opportunities in this sector, despite huge potential.

4. Seaweed

Seaweed was chosen as a topic for research because the NW2045 has instigated exploration into a community-owned seaweed cultivation, harvesting and production business. Seaweed has the potential to replace some fossil fuel-derived materials, such as plastics and fertilisers, with substances that have smaller carbon footprints. A seaweed enterprise thus could offer local livelihoods as part of the green transition and it was hoped that choosing this topic would encourage people to include the ocean in their thinking about climate change.

Documents about seaweed industry prospects in the region were examined to inform participation in an event exploring local people's opinions about a new seaweed enterprise. At this event, participants were asked to write opinions on paper strips shaped like seaweed and these were used as the basis of the three seaweed poems below.

In addition a day-long event was organised with local young people from Kinlochbervie High School, and young artists, which included learning about seaweed at the shore, a visioning exercise about the future, art activity using paper made from seaweed, writing of phrases on paper molluscs, fish and seaweed strands, and creation of a collective art work from the result. Some of their phrases were condensed into the 'What's Cool About Seaweed' poem.



What is cool about seaweed?

There's loads of different kinds of seaweed.
Their categories - egg wrack, sugar kelp...
There are 3 main types – red, green, brown,
different shapes, colourful green and brown shapes.

You can eat seaweed.
You can eat it.
It can be eaten.
They are edible.

It has many uses -
carbon capture, ecosystems, food, fertiliser.
It helps the biodiversity of our seas.
Lowers carbon.
It is versatile.

It grows on each other.
They all grow on each other.
They can reproduce.
They can have sex.

They pop!

(with thanks to the students from Kinlochbervie High School S1&S2 Rural Skills class)

Three Seaweed poems

These poems were created from words written by people at a consultation event in Lochinver about a possible community seaweed enterprise. The questions were: 1. What is the value of seaweed? 2. What could seaweed's value be in future? 3. What actions could increase seaweed's value? There were 9 contributors. Questions 1 and 2 were answered on yellow and orange seaweed-frond-shaped strips of paper, question 3 on blue fish-shaped pieces of paper. The poems use all and only the words written on those pieces of paper.

Seaweed's present value

Complex colours, carbon, compost,
sequestered swim smells, vibrant food.
Great & varied continuation.

Ecosystem element, habitat, home:
a beautiful little kelp forest octopus
tickles me!

When I value it as one person's riches
or as much as people will pay...
hmm

Seaweed's future value

Which is more important?

- A piece of a key ecosystem – future food
- Long-growing seaweed– a cash splurge
- Planet – string
- Possible global system collapse – more time
- Complex, vibrant biodiversity – actual local jobs
- National carbon sequestration – vitamins for sustaining community wellbeing
- Food - how climate becomes part of life

What to do to enhance seaweed's value

Use it as a food-stuff alone
and leave compost for biodiversity and sustainable soil nutrients.
Increase inspiration, faith and recognition
of energy science including reliable carbon tactics.
People want increased economic investment
in bioplastic production growth, use and applications, it's worth more.
Increase harvest, storage and supply.

OR...

Use as food and applications of compost
for reliable, sustainable soil nutrient and energy growth.
Increased recognition and increased economic investment
in biodiversity and carbon production, storage, harvest and supply.
Use tactics for including more people wanting inspiration,
Stuff faith in bioplastic science.
Leave it alone! It's worth more.

This final example shows how using exactly the same words in different combinations can convey completely different, indeed pretty much opposite sentiments. Both versions are 'poemish' rather than poetry, and this exercise shows how poetry can be used to reflect a range of views. The enthusiasm of young people and the local development of a seaweed enterprise both suggest that algae may well form a key part of the green transition in the northwest, and by enabling us to create sustainable substitutes for fossil-fuel based materials, seaweed could help us towards our net zero target.

5. Time travel

During the course of the project, finding ways to generate hope, particularly for young people, became our primary research aim. The seaweed event described above was one experiment in exploring the hypothesis that fun and creative activity explicitly engaging with other times might be a way to build hope in the present and about the future.

The peatland session described above with young people included several playful activities and exploration of how people have used and interacted with peatlands in the past (as a site for spiritual offerings in the bronze age, a burial place for 'bog bodies', a cooler for butter and a source of heating fuel). As a historical novelist, I am aware that delving into the past can enable me to return to the present day with a changed outlook and the young people's enthusiastic learning about bog heritage at this event seemed to confirm this.

I wondered whether it might be possible to use the energy from learning about fascinating past times to imbue thinking about the future with positivity and encourage hope. I therefore devised an exercise in imaginative time travel, back in time, then forwards in time and back to the present, using creative writing as a way to stimulate the imagination. I added a simple emotional check-in at the start and finish, writing a word or phrase on a slip of paper, to find out whether this had any impact on participant's feelings about climate change and the future.

This creative writing exercise was carried out with several groups of young people, including undergraduates from UHI, students from Kinlochbervie High School and participants in a creative research methods event. The imaginary time travel was done with the help of the sea conceived of as a metaphorical time machine, inspired by Tidalectics, which conceives of knowledge as fluid and creative knowledge generation and sharing processes as tidal (Hessler 18). The present is represented as half-tide, and as the tide drops away to low, this is like moving back in time. Then the tide rising is like moving forward in time. Participants are invited to imagine a moment in past time when life was good (it can be in their own lifetime or before) and then to move forward in time the same distance, taking the good thing from the past with them to envisage a possible future. In some cases, each participant was given pieces of paper shaped like waves on which to describe their past and future, and these were laid out to create a collective, instant, poem-like structure on the beach or read out as a poem-of-the-moment. However, the purpose of this exercise was not so much to generate a poem but to explore what the impact of this time-travelling imaginative gymnastics was on the participants.

Therefore, each time this exercise was tried out, participants were asked beforehand how they felt either about future climate change, and then they were asked again after the exercise. Sometimes this was done using the metaphor of 'emotional weather' with post-it notes on which participants would draw a weather-report symbol. The poem below, 'The Future', was the result of asking students at the start of our workshop at 10.30am, 'How do you feel about climate change and the future?' and at 2.30pm, after spending time doing creative things about seaweed use in the past and envisioning the future, 'How do you feel about climate change and the future now?'

The poems below suggest that this imaginative time travel process helps to create hope. More research on this topic is needed.

The Future

In the morning...

I feel baad

Bad

Disappointed by slow progress

Scared

I feel scared and hopeless

Worried

Worried

Apprehensive

Climate change

Climate change

Plastic pollution

It is in chaos

Tipping point

Warm

Deisel (finished)

By the afternoon...

How do I feel about the future? A little terrified to begin with.

Warm 😞

Too warm and bad for the planet.

I feel that the government should be doing more.

More bike trails.

Hopeful from activities like this but also quite scared.

Hopeful

Optimistic

Hopeful & excited!

Good

Great

Good

Great

Gooooood

OK

Interested

Curious

The future is bright

At least seaweed will survive!

With thanks to the students from Kinlochbervie High School S1&S2 Rural Skills class in Lochinver on 22 January 2025, who were asked at 10.30am 'How do you feel about climate change and the future?' and at 2.30pm 'How do you feel about climate change and the future now?'

Imagining climate change

Before:

Please government, ban all plastic packaging
concerning human selfishness
economics is put before it
rapid relief at our real cost

culpable
shameful
exhausted

a looming dagger
devastating – aaaaaaaaargh
gutted.

After:

The aeroplanes have got to go.
I'll take the train or the bus
or maybe not go at all.
A future unknown, unknowing.
Genocide – stealing life that was prosperous.
Same – desperate for a change.

Promises.
Interest.
Adaptation, inevitable.

I have a hope if humans stop being greedy.
Hoping for hope.
Hope!

Constructed from words and phrases written on paper ripples on a beach by Creative Writing students before and after a writing session involving imagining the past and the future and writing about the sea, on Thursday 20 March 2023, responding to the question 'How do you feel about climate change?'

Reflections and conclusions

The research poetry collated here demonstrates that poetry is an effective research method in various ways: as an analytical tool; as a way of synthesising findings; and as a dissemination aid.

Poetry is a powerful device for distilling out key material from a bigger body of texts, as shown by 'Pooling the Results', which is an insightful survey summary, and by the various poems written from interview transcripts, which pull out a readable summary from a sometimes rambling and complex interview. A poem can reveal a core idea explored by an expert or interviewee – sometimes in ways that surprise them. For example, 'Gully Blocking' revealed that the interviewee used similar

language in talking about tackling damage to the land as he did for addressing cultural problems, with a sense that both of these are a kind of healing. 'Reductionism' surprised and delighted its source with the clarity of expression of a way of thinking about climate change that she finds important but not always easy to explain. The diesel molecule poems distil out important concepts for the green transition in succinct form.

Poetry can also combine the opinions and feelings of multiple research participants in ways that show trends and patterns. For example, 'Joining the Dots' clarifies key ideas that are emphasised by multiple experts in their testimonies about alternatives to marine diesel and places them in a narrative sequence that articulates the steps needed towards meaningful action on the green transition. The seaweed poems and time travel poems expose collective expressions of feelings and how these can shift in a positive direction, towards hope.

Finally, because poems are short and often designed to be heard, not just read, they can be presented with ease to an audience without taking up much of their time and with their 'message' made clear through the use of sound patterning, rhythm and other poetic effects. So, for example, 'Pooling the Results', 'The Future' and 'Joining the Dots' have been read out at community organisation meetings in village halls, during zoom sessions for North West 2045's informal meetings and at other gatherings. They can be delivered impromptu, swiftly and offer an entertaining snapshot of the research findings. They have been made available online using Padlet, providing a colourful 'scrap book' effect that is much more approachable than a formal report. They've also been given to Strathnaver Museum for use by their community liaison staff in a folder format, which they have used for school events. Poetry has thus proved itself in this project as a friendly research dissemination method that makes difficult research data (survey results and interview transcripts) digestible. It is a good tool for getting research results to people who would otherwise miss out.

The more fundamental conclusion that I draw, tentatively, from this research is that it is possible to use creative research methods to help generate hope for the future. There are many of us seeking to find ways to encourage positive behaviour changes towards a just and green transition to net zero, but, as Romany Garnett points out so clearly in 'Reductionism', we cannot generate any kind of enthusiasm for climate action if we don't acknowledge people's emotional starting point and find ways to help them move from their state of 'struggling' to something more positive. It is encouraging to be able to suggest that imaginative time travel and other creative activities might be able to help us achieve a more hopeful approach to the green transition to net zero carbon emissions.

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