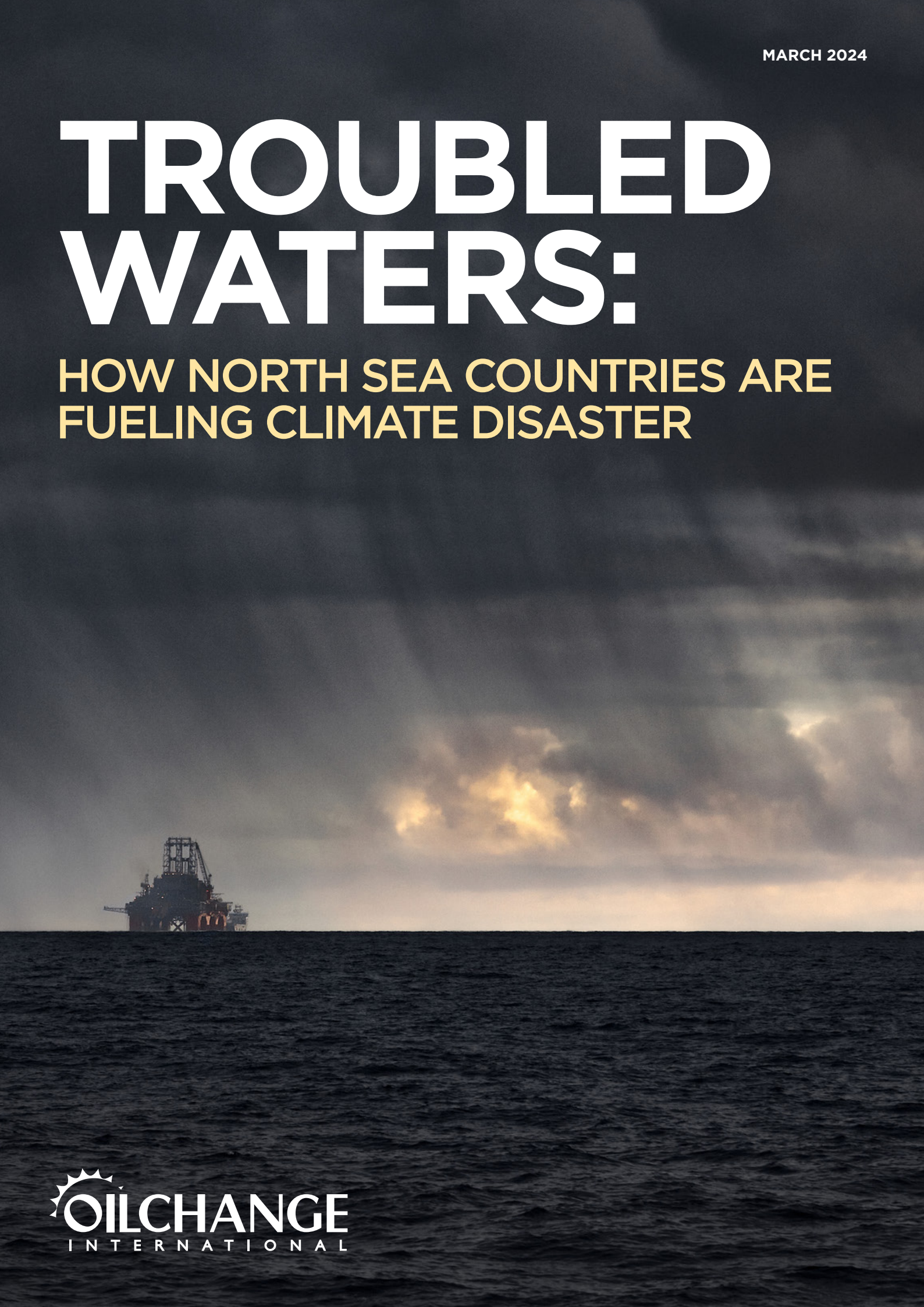
MARCH 2024

TROUBLED WATERS:

HOW NORTH SEA COUNTRIES ARE FUELING CLIMATE DISASTER



OILCHANGE INTERNATIONAL

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Oil Change International is a research, communications, and advocacy organisation focused on exposing the true costs of fossil fuels and facilitating the ongoing transition towards clean energy.

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EXECUTIVE SUMMARY

With every passing month that governments fail to take sufficient action on climate breakdown, we inch closer to the cliff-edge. Fair and fast action to keep fossil fuels in the ground has never been more urgent. In 2023, at the United Nations (UN) climate talks in Dubai (COP28), governments agreed for the first time ever to 'transition away from fossil fuels', sending an unprecedented signal to the fossil fuel industry that its time is up. Now world leaders must urgently put these words into action.

The countries that produce oil and gas from the North Sea – Norway, the UK, the Netherlands, Germany, and Denmark – rank among the countries with the greatest economic capacity and responsibility to rapidly phase out extraction, and to finance just transitions to renewable energy solutions domestically and abroad.

A 2023 report by the Civil Society Equity Review project found that applying principles of equity and precaution would require North Sea producers to reduce their oil and gas production by over 80 percent by 2030, and phase out production by the early 2030s, in order to support a global transition away from fossil fuel extraction by 2050 in a just manner.

These countries often make claims of climate leadership on the world stage, most recently at COP28. What we show in this report, however, should serve as an alarming wake-up call to them.

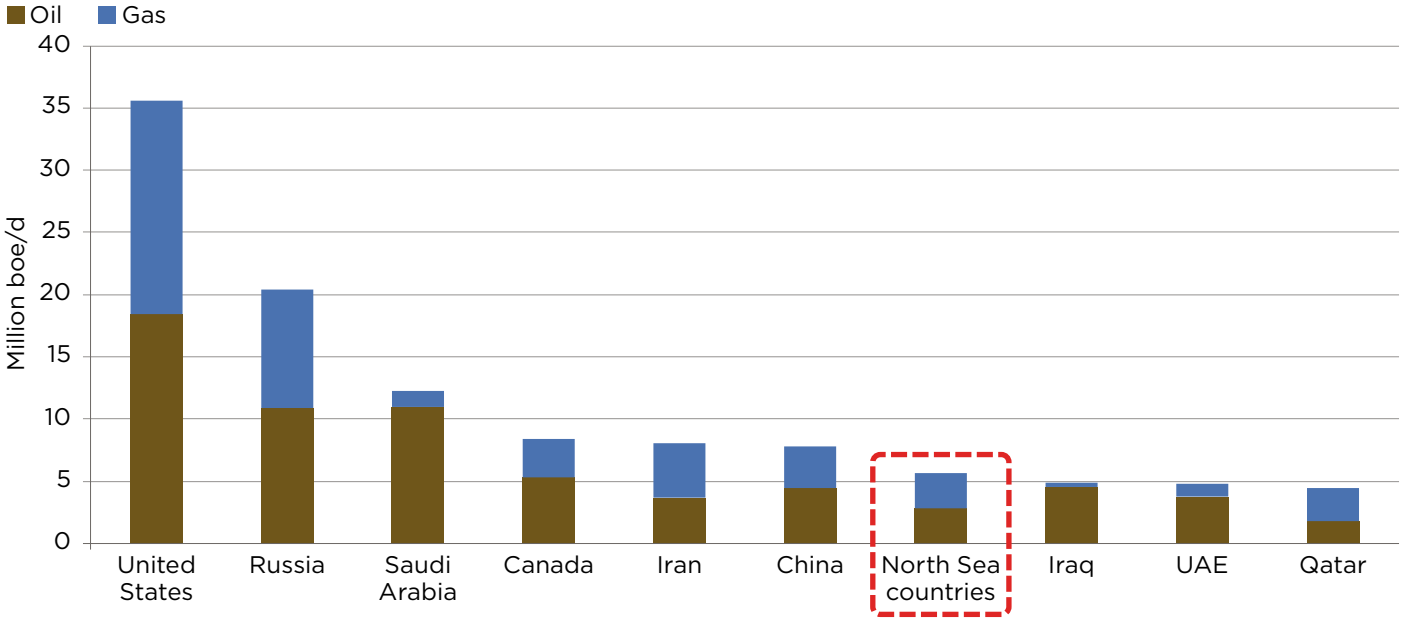
For the first time ever, we have developed a set of benchmarks for rating North Sea countries' oil and gas production policies by their level of alignment with the Paris Agreement. By assessing the oil and gas policies of all North Sea countries (Norway, the UK, the Netherlands, Germany, and Denmark), we show that none are aligned with the Paris Agreement, nor are any contributing their fair share towards the global transition off of fossil fuels agreed in Dubai.

Instead of climate leaders, these countries risk being climate wreckers.

If the five North Sea producers were counted as a single country, they would rank as the seventh-largest oil and gas producer in the world, just behind China. Far from being on track to phase out production in the 2030s, the region could still be extracting significant levels of oil and gas in 2050, particularly in the UK and Norway.

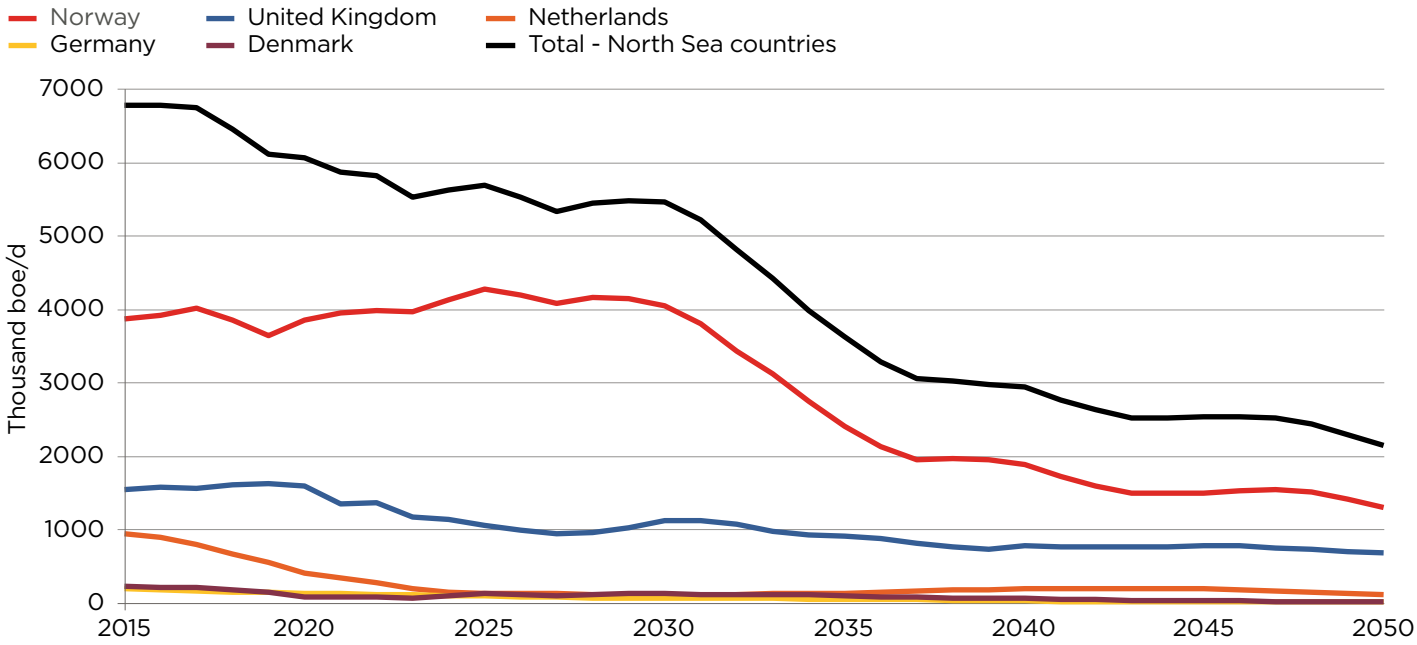
Despite North Sea countries often talking up their climate commitments, none have committed to a phase-out in line with equity and precaution. North Sea countries need to move fast, and they need to plan urgently for how to phase out their oil and gas production in a fair and just way, both in terms of their international commitments and responsibilities, and with regard to the domestic communities that will be impacted by the energy transition.

Figure ES-1: North Sea countries' combined global oil and gas production rank, 2023



Source: Rystad Energy UCube (January 2024). Boe/d = barrels of oil equivalent per day.

Figure ES-2: North Sea countries' oil and gas production, historical and projected



Source: Rystad Energy UCube (January 2024)

Gary Bembridge, Flickr (CC BY 2.0 DEED)

Benchmarks for Aligning Oil and Gas Production Policies with the Paris Agreement

PHASE OUT OIL AND GAS PRODUCTION CONSISTENT WITH 1.5°C

BENCHMARK 1
ALIGN POLICY FRAMEWORK WITH THE PARIS GOALS AND COP28 AGREEMENT TO TRANSITION AWAY FROM FOSSIL FUELS

BENCHMARK 2
END NEW LICENSING (INCLUDING EXTENSIONS OF EXISTING LICENCES)

BENCHMARK 3
STOP APPROVING NEW DEVELOPMENT

BENCHMARK 4
A PARIS-ALIGNED DATE FOR ENDING PRODUCTION

ENSURE AN ORDERLY AND SOCIALLY BENEFICIAL TRANSITION

BENCHMARK 5: INTERNATIONAL COOPERATION
- A. PROVIDE A FAIR SHARE OF SUPPORT TO GLOBAL SOUTH COUNTRIES, INCLUDING TO PHASE OUT PRODUCTION
- B. WORK WITH OTHER GOVERNMENTS TOWARDS A GLOBAL OIL AND GAS PHASE-OUT

BENCHMARK 6
DESIGN FISCAL TERMS TO ALIGN INVESTMENT BEHAVIOUR WITH PRODUCTION PHASE-OUT GOALS

BENCHMARK 7
ADOPT AND IMPLEMENT JUST TRANSITION POLICIES

BENCHMARK 8: REGULATION OF ENVIRONMENTAL IMPACT
- A. REGULATE GREENHOUSE GAS EMISSIONS FROM THE PRODUCTION PROCESS
- B. PROTECT ECOLOGICALLY VALUABLE AREAS FROM OIL AND GAS PRODUCTION

BENCHMARK 9
PLAN FOR RAPIDLY REDUCING OIL AND GAS DEMAND, IN PARALLEL WITH SUPPLY REDUCTIONS

In this report, we ask what it would look like if the North Sea countries became climate leaders and made the necessary changes to achieve a rapid and just transition off of oil and gas extraction. To answer this, we have designed nine benchmarks, and analysed how each country stacks up now compared to what is required by these benchmarks, as well as the potential impact of their policy deficits on global climate breakdown.

Taken together, these analyses paint a picture of failure across the governments of all North Sea countries, and of political leadership that **is not willing or ready to face up to the challenges that lie ahead.**

KEY FINDINGS:

North Sea countries' responsibility to lead:

- Climate impact: If the five North Sea producers were counted as a single country, they would rank as the seventh-largest oil and gas producer in the world, just behind China.
- Economic capacity: The countries surrounding the North Sea rank among the oil- and gas-producing countries with the greatest means to invest in a just transition, and the lowest dependence on fossil fuel revenues.
- Historical responsibility: The five North Sea countries have caused over three times more cumulative climate pollution than all 47 of the world's least-developed countries combined.
- Consequences of inaction: If North Sea countries continue with new oil and gas extraction and exploration, they could cause 10.3 billion tonnes (Gt) of new carbon pollution, equivalent to almost 25 years of annual UK emissions at current levels, all of which is incompatible with a livable climate. Due to extensive licensing and exploration in the past, the potential carbon-dioxide (CO_2) emissions from new fields could amount to nearly 5 billion tonnes (Gt) of CO_2. If new licensing continues, new exploration could further add 5.4 Gt of CO_2 emissions.

North Sea countries' performance overall: None of the five North Sea countries are on track to reduce production in line with the global 1.5-degree Celsius carbon budget (1.5°C), and all are failing to plan domestically for the changes that will need to happen for a just transition.

- The most common ranking across all five countries is 'Grossly Unaligned', with Norway coming out worst with seven 'Grossly Unaligned' ratings out of 11.
- The lagging policies of Norway and the UK have the biggest potential impact on total global emissions. Without an urgent change in policy, Norway and the UK are on track to rank amongst the world's top 20 developers of new oil and gas fields through 2050.[1]
- Across 11 categories for five countries, there are only two 'Fully Aligned' ratings (out of 55 given).
- Denmark outperforms the other countries in a number of areas but still has significant work to do.
- In terms of phasing out production consistent with 1.5°C, the most glaring gap across all countries is their failure to stop approving new fields.

COUNTRY-LEVEL ASSESSMENT HIGHLIGHTS:

NORWAY:

- Overall Norway is the worst of all five North Sea countries we analysed. In terms of aligning its oil and gas policies with the Paris Agreement, Norway rates as 'Grossly Unaligned' in seven of the 11 categories, and as 'Unaligned' in an additional three categories. In addition, Norway has approved the most oil and gas expansion in the region since signing the Paris Agreement and its lack of a phase-out plan would have the largest potential negative impact on global emissions.
- Norway has been, and still is, Europe's most aggressive explorer for more oil and gas. This, combined with the fact that the Norwegian government never has rejected a field development, has led to the country's existing fields already holding far more oil and gas than can be extracted under a 1.5°C trajectory.
- Norway is failing to take leadership in a just transition away from fossil fuels, both on the national stage and internationally. The Norwegian government seems to have no plans for how to implement the agreement from COP28, handing out new licences to the oil and gas industry just a month after the historic agreement.

THE UK:

- The UK comes out as the second worst of all five North Sea countries. It rates as either 'Grossly Unaligned' or 'Unaligned' in ten out of eleven categories. Moreover, of all the North Sea countries, the UK's licensed, undeveloped fields threaten the most potential CO_2 emissions. The UK's failure to stop approving development of new fields that are already licensed would have the biggest potential climate impact of all North Sea countries.
- Once seen as a climate leader amongst countries in the Global North, the UK has fallen significantly behind. The current government continues to proclaim its intent to drain all the oil and gas from the North Sea, and the country is in danger of slipping even further from benchmarks due to proposed legislation that would increase licensing rounds and weaken the climate tests that allow them.
- Behind Norway, the UK is Europe's second most aggressive explorer and producer of oil and gas, and is significantly off track in reducing emissions from production, let alone in achieving a full phase-out of oil and gas. To get back on track the UK needs an urgent plan to end licensing, a phase-out date in the early 2030s and a plan to support workers and communities through the transition.

THE NETHERLANDS:

- The Netherlands rates as either 'Grossly Unaligned' or 'Unaligned' in nine of the eleven categories, with five of those being 'Grossly Unaligned'.
- Rather than committing to phase out production of oil and gas, the Netherlands is attempting to ramp it back up, announcing they are looking to accelerate both exploration and new production of oil and gas. If this goes forward as planned, new fields and licences could nearly double production levels between 2030 and 2045, well past the date when Dutch production should be completely phased out under an equity-driven policy.

GERMANY:

- Germany rates as either 'Grossly Unaligned' or 'Unaligned' in all eleven categories, with five of those being 'Grossly Unaligned'. If our analysis focused on the Paris-alignment of coal production policies, Germany would stand out as the most egregious laggard. However, the global emissions impact of its continued oil and gas production is considerably less than that of Norway and the UK.
- While Germany has comparatively small oil and gas production, it still produces a huge amount of coal, the emissions of which outstrip those from oil and gas by 19 to one.[2] Instead of investing in a full transition away from fossil fuels as they look to phase out the use of coal, Germany is increasing its liquefied natural gas (LNG) infrastructure as a replacement. The lack of policy measures to address other fossil fuels outside of coal has contributed to Germany's poor ratings.
- Germany has the highest estimate of international finance it should pay towards mitigation, adaptation, loss and damage, and extraction phase-out of all the North Sea countries, with a low-end estimate on the scale of more than USD 95 billion (EUR 88 billion) annually by 2030 – almost 15 times the size of Germany's commitment of EUR 6 billion by 2025.

DENMARK:

- Denmark rates the best of all five North Sea countries in terms of aligning its oil and gas policies with the Paris Agreement, but still has a long way to go. It rates as either 'Partially Aligned' or 'Fully Aligned' in seven of the eleven categories, with only one of those 'Fully Aligned'.
- The North Sea Agreement that the Danish Parliament passed in 2020 with an end-date for oil and gas production, and cancellation of new state-initiated licensing rounds, was very important. This agreement has shown the way for other countries. However, the agreement still has several loopholes in it – for instance, it allows for the expansion of production before 2050 – and the phase-out date is neither equity-based nor aligned with the Paris Agreement. New fields could cause Danish production to remain above 2023 levels until after 2035.
- For Denmark to truly take their place as a climate leader, they need to remove the loopholes from the 2020 agreement, and stop all future oil and gas exploration and development in the Danish North Sea. In addition, the 2050 end-date needs to be brought forward to the early 2030s to be aligned with the Paris Agreement.

Ultimately, it is beyond time for North Sea countries to act with real climate leadership. Yet not one of the five North Sea countries currently scores sufficiently well against the policy benchmarks we have set out in this report. In fact, most are alarmingly inadequate at a time when the science could not be clearer

about the need for a full and fast phase-out of fossil fuels if we are to maintain a livable climate. As the head of the International Energy Agency (IEA), Fatih Birol, declared in 2021: 'if governments are serious about the climate crisis, there can be no new investments in oil, gas and coal, from now – from this year'.[3] **The North Sea countries must stop approving any new exploration or extraction, and all five countries must implement stronger phase-out policies. They must focus on leading the way towards a rapid and equitable phase-out of oil and gas production.**

There is still time for North Sea countries to take the action that will put them on the right path domestically and to support other countries to do the same, but they must take such action now and without caveats or let-offs for the fossil fuel industry.

BENCHMARK RATINGS OF THE NORTH SEA COUNTRIES

Fully aligned **Close to aligned** **Partially aligned** **Unaligned** **Grossly unaligned**

	NORWAY	THE UK	THE NETHERLANDS	GERMANY	DENMARK
1. Align policy framework with the Paris goals and COP28 agreement to transition away from fossil fuels	Grossly unaligned	Unaligned	Unaligned	Unaligned	Partially aligned
2. End new licensing (including extensions of existing licenses)	Grossly unaligned	Unaligned	Grossly unaligned	Grossly unaligned	Partially aligned
3. Stop approving new development	Grossly unaligned	Unaligned	Grossly unaligned	Grossly unaligned	Grossly unaligned
4. A Paris-aligned date for ending production	Grossly unaligned	Grossly unaligned	Partially aligned	Grossly unaligned	Partially aligned
5. International cooperation					
A. Provide a fair share of support to Global South countries, including to phase out production	Grossly unaligned	Grossly unaligned	Grossly unaligned	Grossly unaligned	Unaligned
B. Work with other governments towards a global oil and gas phase-out	Unaligned	Unaligned	Unaligned	Unaligned	Fully aligned
6. Design fiscal terms to align investment behaviour with production decline goals	Unaligned	Grossly unaligned	Grossly unaligned	Unaligned	Grossly unaligned
7. Adopt and implement just transition policies	Grossly unaligned	Unaligned	Unaligned	Unaligned	Partially aligned
8. Regulation of environmental impact					
A. Regulate greenhouse gas emissions from the production process	Fully aligned	Partially aligned	Unaligned	Unaligned	Partially aligned
B. Protect ecologically valuable areas from oil and gas production	Grossly unaligned	Grossly unaligned	Grossly unaligned	Grossly unaligned	Grossly unaligned
9. Plan for rapidly reducing oil and gas demand, in parallel with supply reductions	Unaligned	Unaligned	Partially aligned	Unaligned	Partially aligned

1. INTRODUCTION

As the climate crisis escalates, the science is clear that mitigating its impacts requires ceasing the development of new fossil fuel extraction and infrastructure, and phasing out all fossil fuel production and use as quickly as possible. For this phase-out to be equitable, it is equally clear that wealthy Global North countries must move first and fastest, while paying their fair share to finance the transition.

The countries surrounding the North Sea – Norway, the UK, the Netherlands, Germany, and Denmark – are among the wealthiest oil- and gas-producing countries in the world, and are also countries that portray themselves as climate leaders.[4,5]

At COP28 (the UN Climate Summit in Dubai in December 2023), an historic agreement called on all countries to 'transition away from fossil fuels', sending an unprecedented signal to the fossil fuel industry that their time is up.[6] This is the first UN climate agreement to call for this measure. In the aftermath of COP28, it is time for wealthy oil- and gas-producing nations to live up to that agreement.

The science is clear that new oil and gas fields and exploration are incompatible with limiting global warming to 1.5 degrees Celsius (1.5°C). Three years ago, the International Energy Association (IEA) released their first-ever 1.5°C-aligned scenario, and clearly stated, **'there is no need for investment in new fossil fuel supply in our net zero pathway',** and that 'beyond projects already committed as of 2021, there are no new oil and gas fields approved for development'.[7] In fact, governments have already licensed and permitted enough oil, gas, and coal extraction to push global temperature rise far beyond 1.5°C.[8] As of 2023, the majority of fossil fuels within already-producing and under-construction oil and gas fields and coal mines must remain in the ground in order to limit warming to 1.5°C.[9] **Despite this, governments across the North Sea have continued to approve new licensing and production of oil and gas.**

What would it look like for the North Sea region to stop being part of the problem and start leading the world in a fast and fair phase-out of oil and gas production? And how do these countries' current policies stack up against this climate imperative? This report seeks to answer those questions.

We examine the current oil and gas policies in all five North Sea countries, as well as their planned oil and gas exploration and production and the attendant climate implications. For the first time ever, we have also developed a set of benchmark criteria for rating North Sea countries' oil and gas policies by their level of alignment with the Paris Agreement. Based on scientific evidence and principles of justice, we rate all aspects of the different countries' oil and gas policies, including licensing, fiscal terms, biodiversity protection, and just transition policies.

Methodology note: Throughout this report, we use data from the Rystad Energy UCube database for projections of historical and future oil and gas production in North Sea countries. We estimate CO_2 emissions from combustion of oil and gas production using factors of 0.421 tonnes (t) CO_2/barrel (bbl) of crude oil and condensate, 0.235 tCO_2/bbl of natural gas liquids (NGLs), and 54.7 tCO_2/million cubic feet of gas. Oil estimates include crude, condensate, and NGLs. Emissions factors are derived from IPCC guidelines.[10]

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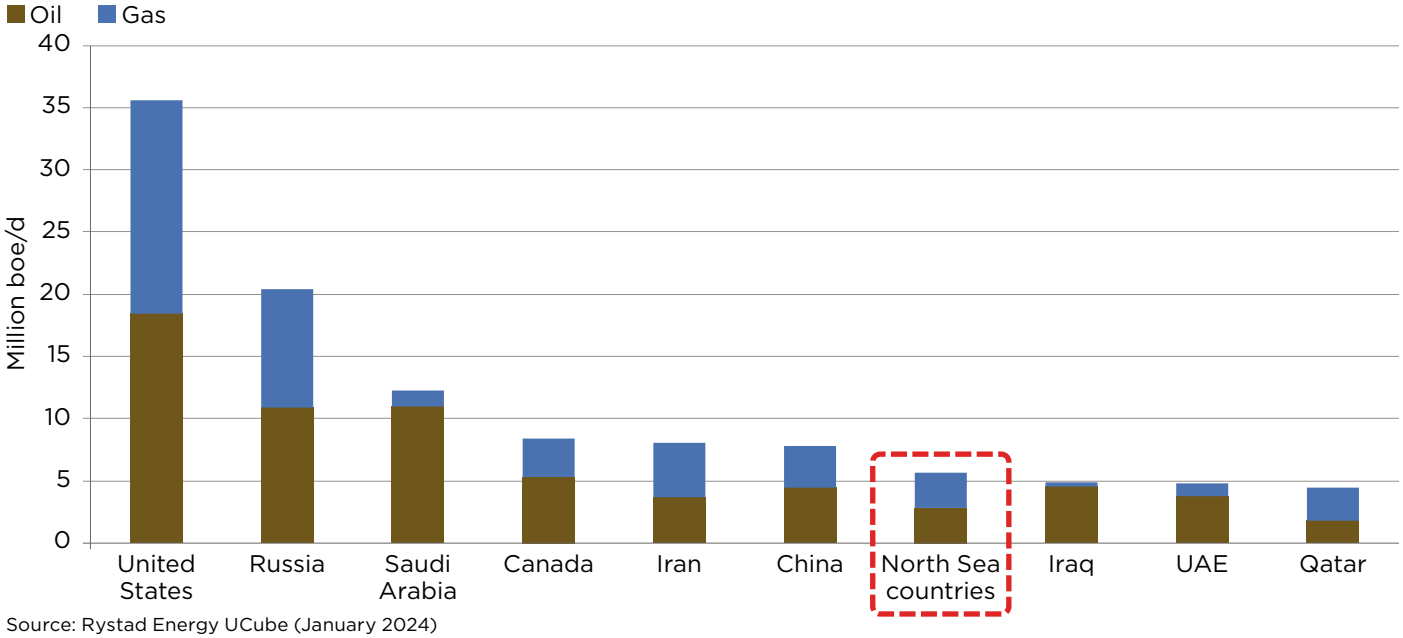
Figure 1: North Sea countries' combined global oil and gas production rank, as of 2023



Source: Rystad Energy UCube (January 2024)

THE GLOBAL SIGNIFICANCE OF NORTH SEA LEADERSHIP IN PHASING OUT OIL AND GAS

The credibility of the COP28 agreement to 'transition away from fossil fuels' is dependent on Global North oil- and gas-producing countries to stop expanding the fossil fuel industry. The North Sea region's oil and gas production is significant to global climate goals due to both its scale and its implications for global equity.

If the five North Sea producers were counted as a single country, they would rank as the seventh-largest oil and gas producer in the world: just behind China, and ahead of Iraq, the UAE, and Qatar (Figure 1). Under current policies, total oil and gas production across the five North Sea countries is projected to decline by less than 10 percent between 2022 and 2030.[11] This projected decline is far short of the global declines of oil and gas required under energy scenarios aligned with limiting global heating to 1.5°C.[a] It is also nowhere close to meeting these countries' global responsibility to phase out production first and fastest.

The North Sea region is also a globally significant threat for developing new oil and gas extraction over the next three decades. This is due primarily to the region's two largest producers: Norway and the UK. A September 2023 report by Oil Change International showed that Norway and the UK are among the top 20 countries that could account for the most carbon dioxide (CO_2) pollution from new oil and gas fields between 2023 and 2050.[12] Together, the UK and Norway's plans for new licensing and extraction through 2050 could cause 4.8 billion tonnes (Gt) of new carbon pollution, on top of the pollution caused by existing production. This scale of new carbon pollution would be equivalent to the annual emissions of over 12,000 gas power plants[13] – more than are operating in the world today.[14]

Not only are Norway and the UK failing to address the impact of their historic and current oil and gas extraction, they are also facilitating new production that is incompatible with global carbon budgets, and that undermines global efforts to reduce emissions.

At the same time, the North Sea oil- and gas-producing countries are amongst those with the greatest means and responsibility to be first movers in phasing out oil and gas production – and could therefore become models for how to accomplish phase-outs while ensuring a just transition for affected workers and communities.

The North Sea countries have diversified economies. Oil and gas typically provide less than one percent of government revenue in Denmark,[15] Germany,[16] the Netherlands,[17] and the UK.[18] While the oil and gas share of revenue in Norway was over 20 percent as of 2021, the country also has other dynamic sectors; one of the world's highest levels of income per capita; and the world's largest sovereign wealth fund to invest in and enable a transition.[19]

Whatever the challenges of phasing out production in the North Sea countries, their transitions have the potential to be much easier and faster than in countries highly dependent on oil and gas revenues, especially those in the Global South that have fewer economic resources. The North Sea countries should therefore lead the way in aligning their oil and gas policies with the goals of the Paris Agreement. This includes leading the way in funding just transitions domestically and abroad. For reasons of fairness and practicality, international funding to enable Global South countries to phase out fossil fuel production is vital, and needs to be given in tandem with support for adaptation, loss and damage, and other mitigation efforts.

a Global oil and gas supply declines by 20 percent from 2022 to 2030 under the IEA's 1.5°C-aligned Net Zero Emissions scenario. This should be seen as a minimum benchmark for ambition, given recent science indicates the world's remaining global carbon budget to limit warming to 1.5°C is significantly smaller than assumed in the scenario; and given the scenario's reliance on carbon capture and storage and on other carbon-dioxide removal technologies with a track record of failure and poor performance. By comparison, the IPCC illustrative mitigation pathway that avoids reliance on CCS and carbon removal in the energy sector shows oil and gas production and use falling by 47 percent by 2030, relative to 2020 levels.

2. CHARTING A PARIS-ALIGNED PHASE-OUT: GLOBAL PRINCIPLES AND THE NORTH SEA CONTEXT

In this section, we lay out key foundations and principles that underpin our benchmark criteria for Paris-aligned oil and gas policy. We also provide context on how these foundational principles apply to the North Sea as a region.

Broadly, our assessment takes into account the Paris Agreement's enshrining of both long-term temperature limits as well as principles of equity. From a scientific standpoint, governments have committed to cooperate towards limiting global temperature rise to 1.5°C, and, as of 2023, have recognized that this requires '[t]ransitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner, accelerating action in this critical decade, so as to achieve net zero by 2050 in keeping with the science'. The Paris Agreement further stipulates that countries' pledges and strategies should take into account the principles of common but differentiated responsibilities and respective capabilities.[20] This means, based on widely agreed-upon moral principles, that those who did the most to cause the problem should do the most to help solve it; and that, in a cooperative effort, the greatest contribution should be made by those with the greatest capabilities. The Agreement's preamble further uplifts just transition, human rights, Indigenous rights, and the integrity of ecosystems as integral.

Thus, we assess countries not only on their ambition to phase out oil and gas production in a 1.5°C-consistent manner, but also on their commitment to managing this transition in ways that are equitable and socially just. Core to our approach is recognizing the pivotal role of governments in driving the production of fossil fuels – and managing its phase-out.

GOVERNMENTS' PIVOTAL ROLE IN TACKLING FOSSIL FUEL PRODUCTION

A large part of the climate problem is conceptually quite simple: The world has found too much fossil fuel. Not only is too much fossil fuel consumed year-on-year, but there is also too much fossil fuel in known reserves,[21] too much infrastructure to extract or consume fossil fuels,[22] and too powerful a set of fossil fuel interests to easily solve this conceptually simple problem.[23] Put differently, failure to tackle fossil fuel production to date is a central reason that the world is not on track for limiting warming to safe levels.

As governments continued to approve new fossil fuel extraction and infrastructure, fossil fuel-driven carbon pollution hit yet another record high in 2023.[24] The *Production Gap Report*, co-published by the UN Environment Programme, Stockholm Environment Institute, and others, found that governments' planned fossil fuel production in 2030 is double what would be consistent with the Paris goals.[25]

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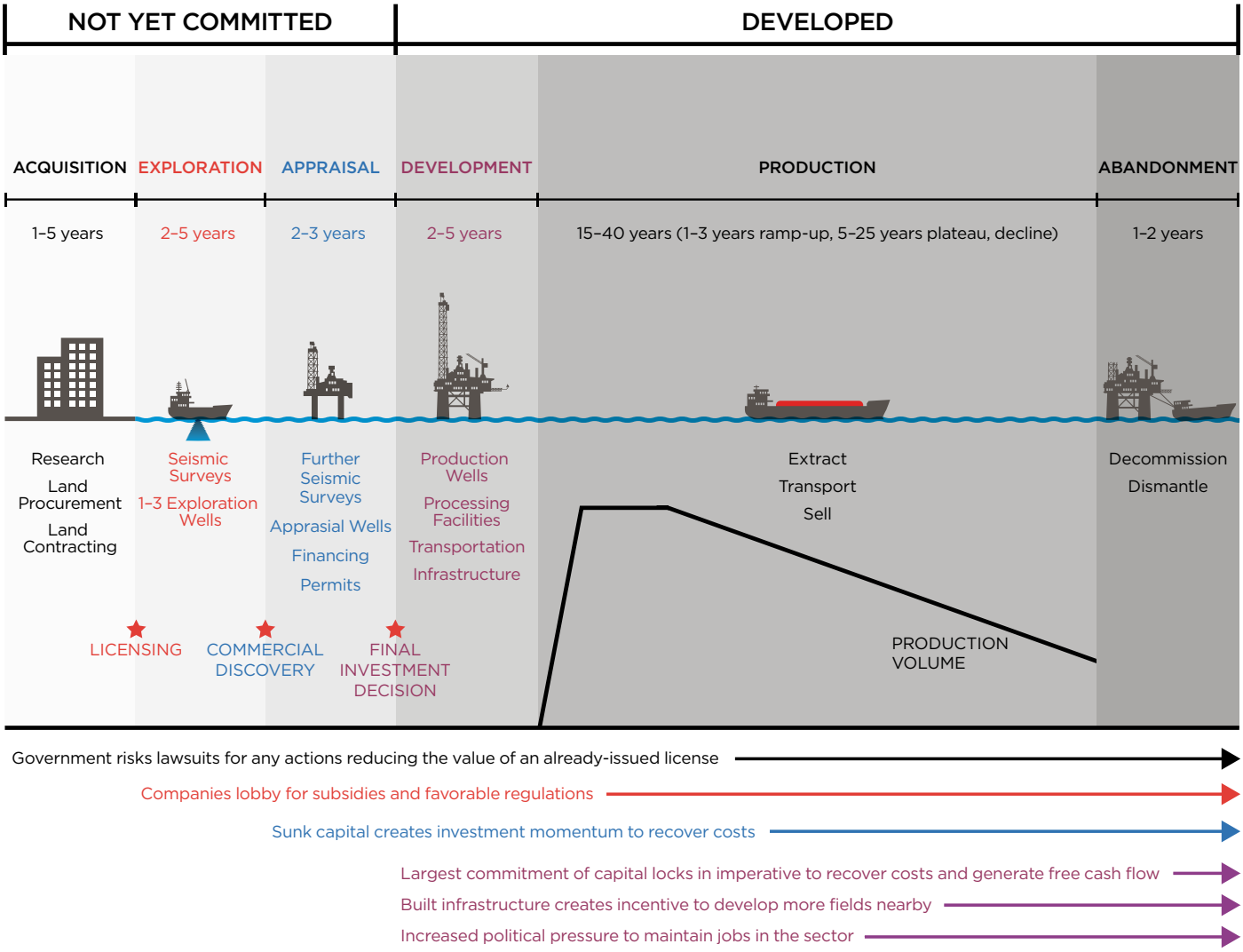
Figure 2: Lifecycle of a typical oil and gas field, showing the kinds of lock-in that typically occur at each stage



Source: Oil Change International

Some governments assert that if they do not produce oil and gas, then others will produce the same amount elsewhere. This is incorrect: The amount of fossil fuels consumed – and hence greenhouse gas emissions – are shaped by factors of both supply and demand, both of which are directly influenced by government policy.[26] For example, studies indicate that investments in new gas supply tend to displace demand for renewables as much as they displace other fossil fuels.[27]

Aligning oil and gas production with the Paris goals will hinge on governments mustering the political will to put an end to the expansion of fossil fuels, and enacting comprehensive policies to manage the rapid phase-out of fossil fuel production and use.

Long-lived impact: New licences and permits lock in decades of new pollution

The long-term impact of government decisions regarding fossil fuel production cannot be overestimated. For example, oil and gas contracts and licences commonly last 30 years or more;[28] oil and gas platforms last 25 to 50 years;[29] pipelines last 30 or 40 years;[30] and so on. Hence, policies and decisions today will affect the energy system well into the future.

The longevity of these decisions increases the risk of carbon lock-in: once carbon-intensive decisions are made, it becomes much harder to reduce emissions in the future due to sunk capital, lasting institutions and interests, or habitual behaviours and social structure.[31] In the North Sea countries there is a risk of reinforcing this carbon lock-in at a time when we need to rapidly unwind fossil fuel infrastructure.

In the lifecycle of an oil and gas field depicted in Figure 2, governments must typically issue a licence (or lease or contract) to a fossil fuel company before the company can explore for oil and gas resources. If oil and gas is discovered, companies typically need various permits or consent from governments before proceeding with construction and extraction. Governments decide whether to issue or deny permits for pipelines, export terminals, and other types of infrastructure that companies rely on to transport extracted oil and gas.

Whereas the earlier stages see expenditure in the tens of millions of dollars, the final investment decision unlocks investments commonly in the billions. It is only after construction is completed that the first oil or gas is produced, often ten or more years after the licence was awarded. Production will then continue, usually for two or more

decades, until all commercial oil and gas has been extracted, followed by a process of decommissioning and cleanup.

At each stage in this process, the company and other actors become more committed to the project, contributing to carbon lock-in: legal rights are granted, capital is sunk, people are employed, revenues are generated. In order to align with the Paris goals, the aim of policy must be to reduce the amount of fossil fuels. Policies will be easiest to enact at the earliest stages in the process; as such, stopping the awarding of licences is the first step in any Paris-aligned oil and gas policy.

This is why UN Secretary General António Guterres has said that those governments who continue to expand fossil fuel production are the truly dangerous radicals.[32] Continued fossil fuel investments commit the world either to radically dangerous degrees of climate change, to radically disruptive, rushed decarbonisation at a later date, or to both. If the energy transition is to be orderly and socially beneficial, rather than chaotic and socially harmful, today's long-term decisions must be aligned with governments' long-term goals under the Paris Agreement.

A fast and fair transition must be proactively managed – not 'left to the market'

If the world's governments had acted sufficiently on climate change starting from 1990, or even 2000, emissions could have been slowly reduced over a period of several decades while limiting warming to 1.5°C above pre-industrial levels.[33] Since emissions have instead consistently risen since 1990, the world's remaining 1.5°C carbon budget at the start of 2024 is well under 300 gigatonnes (Gt) of carbon dioxide,[34,35] equal to five to seven years' worth of present emissions.[36] Holding temperature rise to that limit thus now requires dramatic action to rapidly cut fossil fuel production and use in just a few years. Leaving this process to the vagaries of markets is a recipe for disaster, for both the climate and workers and for the communities on the frontlines of the transition.[37]

Some governments' preference to 'leave it to the market' when it comes to fossil fuels and climate change is in stark contrast to the rest of oil and gas policy, which is never 'left to the market'. Governments have actively intervened in fossil fuel markets for over a century, whether through diplomacy towards other governments, subsidies, research and development for new technologies, or building enabling infrastructure. In other words, they actively manage oil and gas production, an approach which should also apply to the energy transition.

Without governments managing the process, markets are unlikely to deliver the rapid production declines required to curb the climate crisis; and the process of transition, whether rapid enough or not, will entail more disruption to energy systems, economies, and communities. Comprehensive government policy is required in order to align energy supply and demand; minimise price swings as markets adjust; ensure workers are retrained or redeployed at a pace that keeps up with job losses; and ensure companies meet their obligations to clean up polluted sites.[38] 'Leaving it to the market' risks decimating communities that rely on the jobs provided by the oil and gas industry[39], leaving decommissioning unfunded[40], and increasing energy poverty.[41]

It is therefore essential that governments ensure a just transition at all levels – local, national and global. A truly just transition away from oil and gas for all of the North Sea countries means leading globally in a fast and full phase-out. It also means putting domestic workers and communities who will be most affected at the front and centre of the process, ensuring that they have a place in leading decision-making and conversations, rather than just consulting with them at the end of the process. While the energy transition will impact everyone, and everyone should be involved and prepared, we must prioritise those areas that rely the most on the oil and gas industry for jobs and local economies to ensure they are not left behind.

Wealthy countries' responsibility to lead

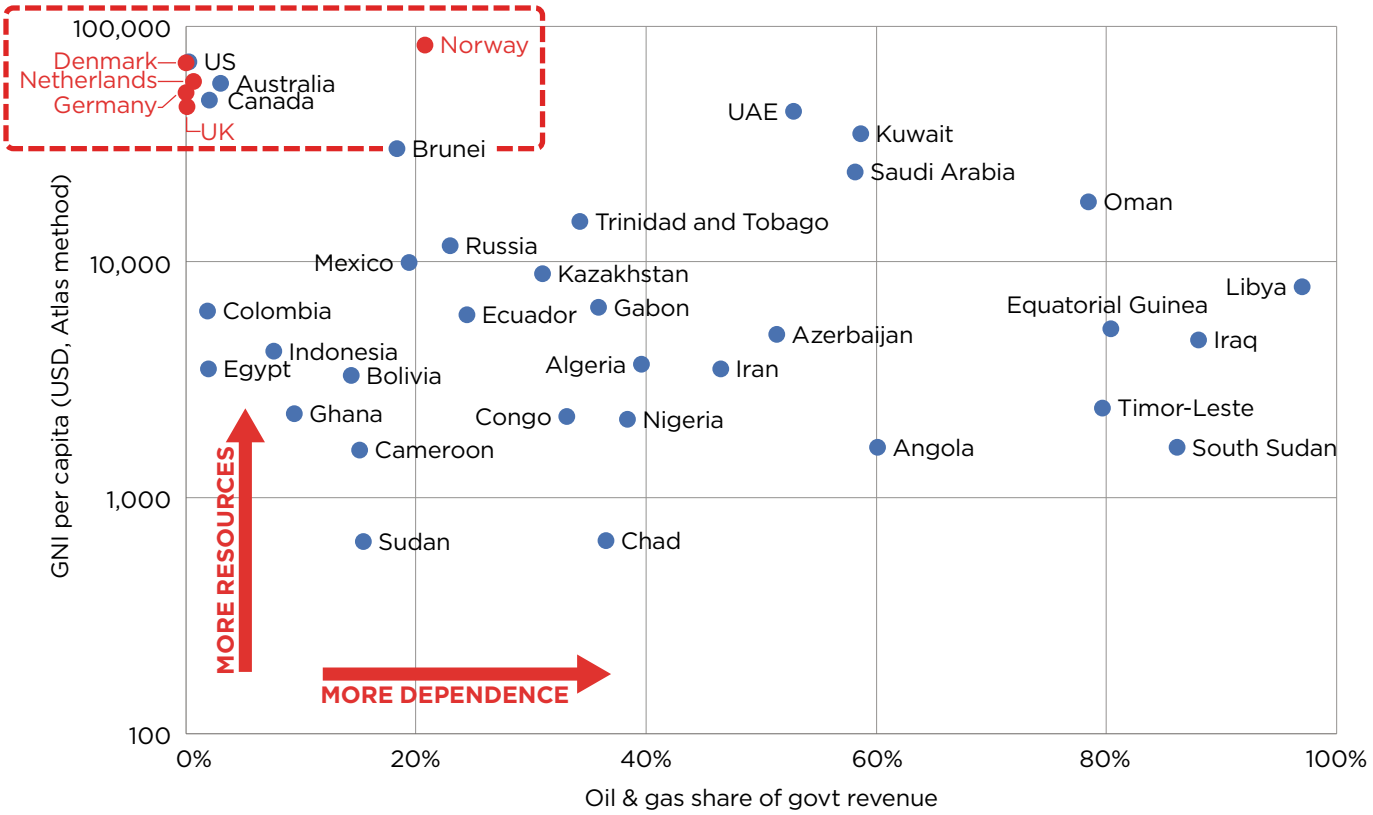
The science is clear that expansion of both existing and new fossil fuel production needs to end everywhere, as part of ensuring an immediate and swift decline in fossil fuel production and use. However, the responsibility for rapidly phasing out fossil fuels does not lie with all countries equally: The Paris Agreement is clear that countries of the Global North must act first and fastest in mitigating climate change, while providing support to enable other countries to act.[42]

While phasing out production will involve challenges everywhere, it will be especially difficult in economies that depend heavily on oil and gas revenues to fund public services, and that have the least capacity to invest in a just transition that protects people from social and economic disruption.[43] For example, oil exports provide 60 percent of government revenue in Angola, 80 percent in Equatorial Guinea, and 88 percent in Iraq – all countries with limited non-oil economies capable of absorbing workers or growing to fill the gaps caused by phasing out fossil fuels.[44] These challenges are made greater by international monetary, trade, tax, and debt rules – set by and systematically skewed towards Global North countries – that have stripped Global South countries of wealth and left their governments with limited options for funding public goods and choosing sustainable development paths.[45]

Figure 3 illustrates that countries surrounding the North Sea (alongside other Global North producers like the U.S., Canada, and Australia) are among the countries with the greatest capacity to invest in a just transition and the lowest dependence on fossil fuel revenues. As a recent academic study of Norwegian opportunities for oil transition asked: if North Sea producers cannot address this challenge, who can?[46]

The region as a whole also bears outsized historical responsibility for fueling the climate crisis. Led by Germany and the UK, the five North Sea producers account for over nine percent of total global

Figure 3: Countries' economic dependence on oil and gas (share of government revenues), plotted against income (Gross National Income per capita)



Source: World Bank,[48] International Monetary Fund,[49] various national agencies[50]; GNI and revenue share estimates are as of 2021 (or next year available). Y-axis marks increase by a factor of 10 (eg, are scaled logarithmically).

greenhouse gas pollution from 1850 to 2021. Furthermore, the five North Sea countries have caused over three times as much cumulative climate pollution as all 47 of the world's least-developed countries combined.[47] This is before accounting for the role of the North Sea countries in driving colonialism, which is at the root of the climate crisis.

This means that countries of the North Sea region should be the global leaders in phasing out oil and gas production first.[51] A 2023 report by the Civil Society Equity Review project, endorsed by over 200 organisations, assesses fossil fuel production phase-out timeframes by country. Their assessments are measured according to the goal of limiting warming to 1.5°C, and according to countries' economic capacity, historical responsibility, and fossil fuel dependence.[52] The report finds that applying principles of equity and precaution requires North Sea producers to reduce their production by over 80 percent by 2030, and to phase out production by the early 2030s, in order to transition away from fossil fuel extraction globally by 2050 in a just manner. Researchers at the Tyndall Centre for Climate Change Research reached similar conclusions in a 2022 report on fossil fuel production phase-out pathways.[53]

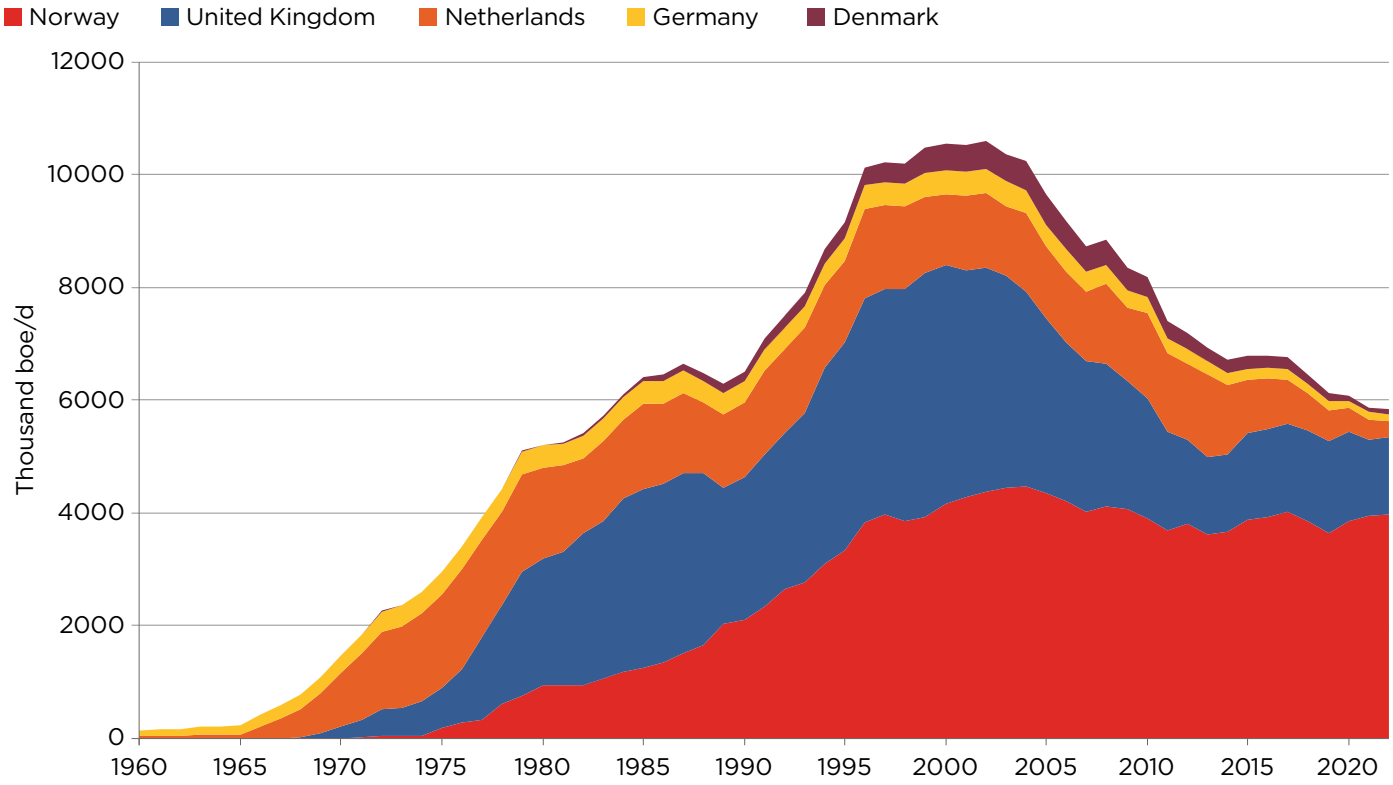
It is widely recognized that a fast and fair global phase-out of oil and gas extraction also hinges on adequate flows of public finance. Global South countries that are highly dependent on extraction and have the least economic capacity will need both time and finance to disentangle their economies from fossil fuels and to build new economies.[54] It is reasonable and just that the international support and finance required to enable a global exit from extraction be provided by countries with both the greatest capacity and the historical responsibility for the climate crisis – pointing again to North Sea countries' responsibility to lead.

SETTING THE SCENE: RAPID NORTH SEA PHASE-OUT UNDERMINED BY APPROVALS OF NEW EXTRACTION AND LICENSING

As shown in previous sections, North Sea oil and gas production is globally significant: If counted as a single country, the North Sea producers would rank as the seventh-largest oil and gas producer in the world. Here we provide an overview of the current status and trajectory of oil and gas extraction in the region, showing why North Sea countries urgently need to increase their phase-out ambitions – as laid out in the benchmarks that follow.

Oil and gas production has a long history in the countries surrounding the North Sea, taking off in the 1960s in the Netherlands and Germany, and in the 1970s in the UK, Norway, and Denmark. As a result, much of the region's oil and gas resources have already been extracted; their burning helped fuel the 1.2°C of global temperature rise

Figure 4: Historical oil and gas production across the North Sea countries, 1960-2022



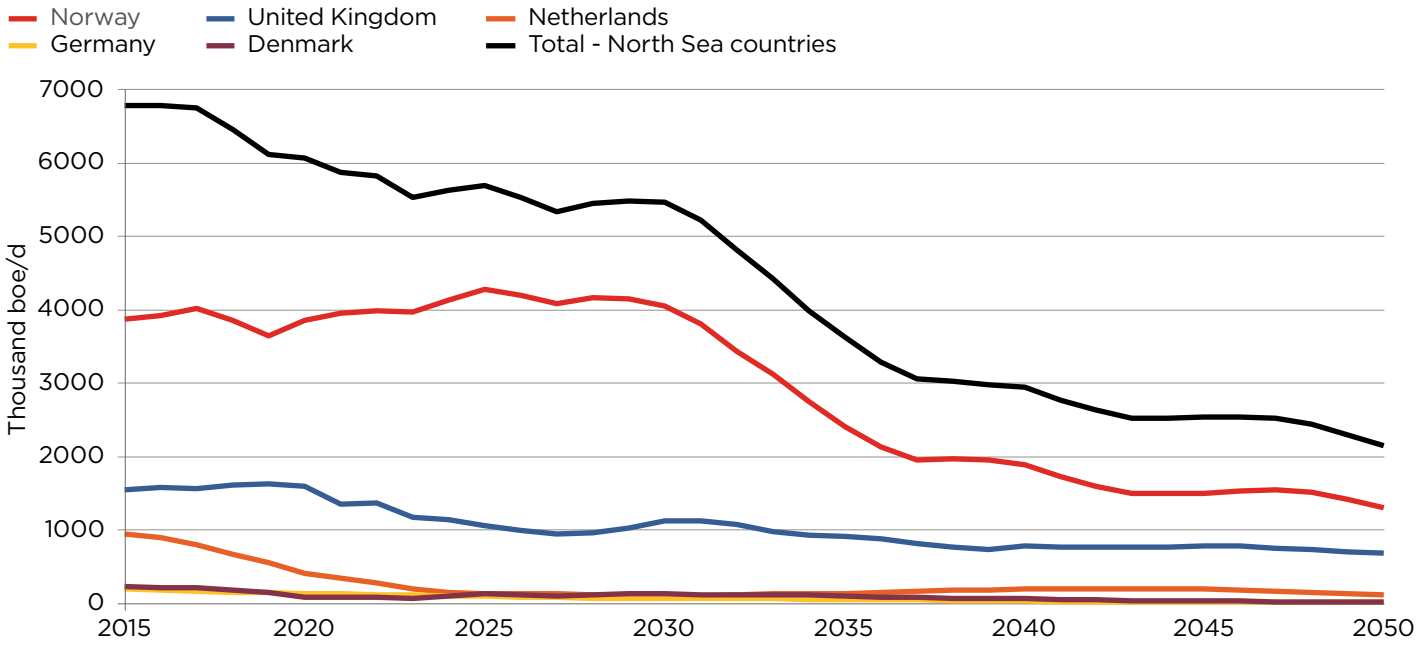
Source: Rystad Energy UCube (January 2024)

to date that is already wreaking havoc on communities across the world.[55] The region's overall production peaked in the early 2000s at over 10.5 million barrels of oil per day (boe/d) (Figure 4). For the countries we analyse, the question is not whether oil and gas production will decline, but whether that decline will be sustained and rapid enough to help stave off global climate catastrophe, and managed in a just and equitable manner.

While all countries surrounding the North Sea have a responsibility to lead in phasing out oil and gas, the most significant current producers – in terms of their role in global extraction – are Norway and the UK. Of more than 5.5 million barrels of oil and gas per day the five countries extracted in 2023, Norway and the UK together accounted for 93 percent, followed by the Netherlands at three percent, and Germany and Denmark at two and one percent, respectively. The region's production is split nearly evenly in half between oil and gas.

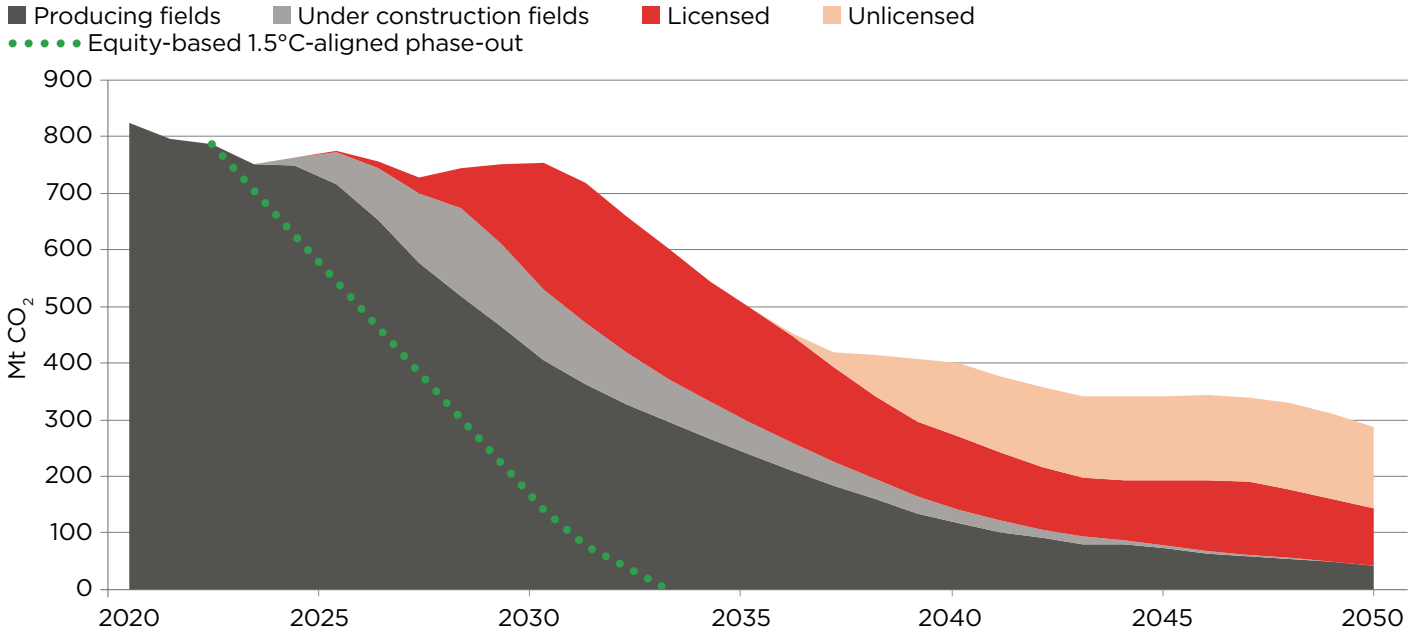
While production is in structural decline across the five countries, the decline is not evenly distributed (Figure 5). Norway's oil and gas production grew slightly between 2016 – the year the Paris Agreement went into effect – and 2023. In the UK, production peaked just above 2016 levels in 2019 before falling again at the onset of the Covid-19 pandemic. The Netherlands has seen the steepest fall in production over the past decade, followed by Denmark and Germany. Looking

Figure 5: Production by North Sea countries, since the Paris Agreement and projected to 2050



Source: Rystad Energy UCube (January 2024)

Figure 6: North Sea countries' projected oil and gas production, by annual CO_2 emissions and current stage of development, compared to an equity-based 1.5°C-aligned phase-out



Source: Oil Change International analysis of data from Rystad Energy UCube (January 2024), Civil Society Equity Review[56]

forward, Rystad Energy's current outlook shows total production falling by less than 10 percent from 2022 to 2030, with a decline in gas production being offset by increased oil production, driven by new development in Norway.

The region as a whole is far off-pace from phasing out its production in the 2030s, as would be required by equity and precaution; and could still be extracting significant levels of oil and gas in 2050, particularly in the UK and Norway. As indicated in Figure 6, even already-producing oil and gas fields hold significantly more reserves than can be extracted under an equitable phase-out scenario. To lead in a global phase-out of oil and gas, North Sea countries will not only need to end new licensing and permitting of new extraction, but also must manage a rapid phase-out of existing fields. In other words, beyond ceasing new development, North Sea countries should urgently be planning for the early retirement and decommissioning of the oil and gas that is already developed.

Instead, more rapid declines in production are being stalled and undermined – most significantly in Norway – by the continued licensing and permitting of new oil and gas fields. Figure 6 shows that any new licences issued by governments are unlikely to result in new oil and gas production until after 2035 – at which point North Sea countries' production should be phased out per the requirements of equity and precaution.

Table 1: New extraction approved and licensed by country since the Paris Agreement went into effect, 2017-2023

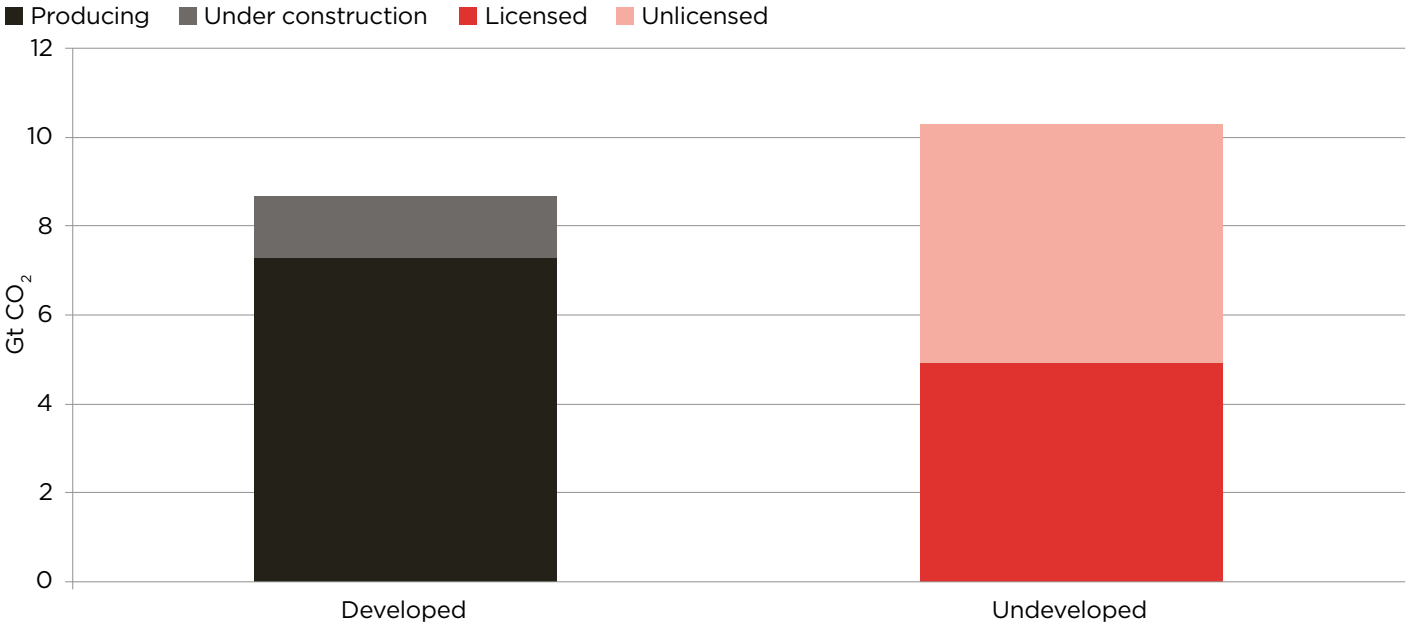
Country	Number of final investment decisions to develop new extraction[b]	Oil and gas reserves approved for extraction, Million BOE	Number of new licences awarded for exploration	Oil and gas resources licensed for exploration, Million BOE
Norway	68	7228	278	2499
United Kingdom	36	952	143	300
Netherlands	15	278	2	5
Denmark	2	224	0	0
Germany	3	7	13	9
Total	124	8688	436	2813

Source: Rystad Energy UCube (January 2024)

While all North Sea countries have, to varying extents, continued approving and/or licensing new oil and gas extraction since the Paris Agreement went into effect (Table 1), Norway and the UK stand out as the worst culprits in both categories. From 2017 through 2023, 68 new oil and gas extraction projects were approved in Norway, accounting for over 80 percent of new oil and gas approved for extraction across the region since 2016. While the UK does not have the same scale of remaining resources to exploit as Norway, it has approved dozens of new projects and licences as part of a government policy to 'max out' production to the extent possible.[57] Even in Denmark, which banned most new licensing in 2020, a gas field redevelopment project approved in 2017 could increase Danish production for a number of years this decade. It is important to note that the totals presented in relation to projects approved for extraction are based on the final investment decisions (FID) taken by companies to begin construction of new fields or significant field expansions; that is, these totals do not include decisions to drill new wells within existing fields. Also, the company FID is taken after a government grants final development approval for a project. Due to lag time between government approvals and company FIDs, government approvals over this period could be a higher number than is indicated in the table.

b This count reflects the number of final investment decisions (FIDs) to develop new assets taken by companies over this period. The government must grant development approval before an FID can be made.

Figure 7: Potential cumulative CO_2 emissions from North Sea countries' projected oil and gas extraction, by developed vs undeveloped fields



Source: Oil Change International analysis of data from Rystad Energy UCube (January 2024)

Table 2: Potential cumulative CO_2 emissions from North Sea countries' projected oil and gas extraction, by country and stage of development

	Developed fields		Potential new development		Total potential emissions
	Producing reserves	Under construction reserves	Licensed oil and gas (new fields)	Unlicensed oil and gas (new exploration)	
Country	**Emissions, Mt CO_2**				
Norway	5517	1051	2204	2638	11411
United Kingdom	1186	203	2502	1211	5104
Netherlands	321	26	81	360	790
Denmark	130	84	81	5	301
Germany	141	0	37	1172	1351
Total	7297	1365	4907	5390	18959

Source: Oil Change International analysis of data from Rystad Energy UCube (January 2024)

Political debates around oil and gas policy across the region have begun to focus on ending new licensing – with Denmark leading the way. **However, oil and gas that is already licensed but not yet approved for development poses a climate threat nearly equal to that of new licensing.**

Due to extensive licensing and exploration in the past, the potential CO_2 emissions from new fields could amount to nearly 5 Gt of CO_2 pollution. If new licensing continues, new exploration could further add 5.4 Gt of CO_2 pollution (Table 2).

Together, that adds up to 10.3 Gt of new carbon pollution threatened by new oil and gas fields and licensing across the North Sea region (Figure 7), which is equivalent to almost 25 years of annual UK emissions at current levels.[58] Without a clear change in policy, new oil and gas development could more-than-double the carbon pollution caused by the region's oil and gas extraction between now and the end of this century (Figure 7), despite the fact that the oil and gas developed thus far is already more than can be safely or fairly extracted.

In the section that follows, we set out benchmarks for how the countries surrounding the North Sea can right the course – and fully align their oil and gas policies with the demands of climate science and climate justice.

3. BENCHMARKS FOR SCORING OIL AND GAS POLICIES: ALIGNING WITH THE 1.5°C LIMIT AND THE PARIS AGREEMENT

In this section, we identify and explain benchmarks for nine main functions of oil and gas policy that need to be aligned with the Paris Agreement goals (Table 3).

The first four functions give governments the power to ensure oil and gas production levels are consistent with the Paris goal of limiting temperature increase to 1.5°C above pre-industrial levels.

The last five functions allow governments to manage the transition in an orderly and socially beneficial way, in relation to both the 1.5°C goal and the wider imperative for a just transition that protects peoples' rights, their livelihoods, and ecosystems. In this section, we explain the rationale for each benchmark that underpins our country ratings.

Table 3: Benchmarks for rating North Sea countries' oil and gas policies against the Paris Agreement

PHASE OUT OIL AND GAS PRODUCTION CONSISTENT WITH 1.5°C

1. Align policy framework with the Paris goals and COP28 agreement to transition away from fossil fuels

FULLY ALIGNED	Alignment of production with the 1.5°C warming limit and with other aspects of the Paris Agreement (such as equity and just transition) is a legislated goal of oil and gas production policy; AND the policy framework and strategy documents clearly interpret this into policy action, and into plans for production decline, based on well-grounded and equitable assumptions about how efforts are to be shared between countries.
CLOSE TO ALIGNED	Alignment of production with the 1.5°C warming limit is a stated goal of oil and gas production policy; AND interpretive policy stipulates that this entails rapid decline and states some policy actions to achieve this, but does not necessarily assess the implied decline rate in context of global production.
PARTIALLY ALIGNED	Alignment of production with the 1.5°C warming limit is a stated goal of oil and gas production policy; but with limited guidance on how this is applied in practice.
UNALIGNED	Alignment of production with the Paris goals and a 1.5°C warming limit is implied to be relevant to and gas production policy, but details are not specified on how this is to be applied.
GROSSLY UNALIGNED	Alignment of production with the Paris goals is not considered a goal of oil and gas production policy.

2. End new licensing (including extensions of existing licenses)

FULLY ALIGNED	No further licensing is permitted in any form, and this exclusion is governed by legislation.
CLOSE TO ALIGNED	No further licensing is permitted in any form, according to policy statements or regulations or as their de facto consequence.
PARTIALLY ALIGNED	Licensing is permitted only in limited circumstances (such as where a company operates a neighbouring field) and no licensing rounds will be held; OR future licensing decisions are subject to a transparent, meaningful assessment of consistency with Paris goals, including scope 3 emissions, with strong public and expert involvement.
UNALIGNED	Licensing is allowed but subject to a limited or partial process to assess consistency with Paris goals (e.g. not including scope 3 emissions, or not considering the country's production in global context).
GROSSLY UNALIGNED	Active programme on ongoing licensing without consideration of Paris-consistency.

3. Stop approving new development

FULLY ALIGNED	No new development is permitted, and this exclusion is governed by legislation.
CLOSE TO ALIGNED	No new development is permitted, according to policy statements or regulations or as their de facto consequence.
PARTIALLY ALIGNED	Active process of revising or renegotiating undeveloped existing licences, seeking to minimise new developments; OR development decisions are subject to a transparent, meaningful assessment of consistency with Paris goals, including scope 3 emissions, with strong public and expert involvement.
UNALIGNED	Some new developments are blocked on climate grounds; OR development is allowed but subject to a limited or partial process to assess consistency with Paris goals (e.g. not including scope 3 emissions, or not considering the country's production in global context).
GROSSLY UNALIGNED	No restrictions on new field/project development.

4. A Paris-aligned date for ending production

FULLY ALIGNED	A production end-date of no later than 2035 has been enshrined in legislation, consistent both with Paris goals at a global level and with faster phase-out in Global North.
CLOSE TO ALIGNED	A Paris-aligned equitable end-date of no later than 2035 for production has been stated in policy; OR a legislated end-date of no later than 2045 is somewhat ahead of Paris-aligned global average.
PARTIALLY ALIGNED	An end-date of no later than 2050 has been stated in policy, consistent with global average for Paris-aligned phase-out but not equitable differentiation.
UNALIGNED	An end-date of later than 2050 has been stated in policy.
GROSSLY UNALIGNED	No end-date has been stated.

ENSURE AN ORDERLY AND SOCIALLY BENEFICIAL TRANSITION

5. International cooperation

A. Provide a fair share of support to Global South countries, including to phase out production

FULLY ALIGNED	International finance contributions equal the country's fair share according to equity principles, including a fair share of concessional finance to enable a production phase-out by Global South producers AND support for technological transfer and reforming aspects of international financial, trade, investment, and tax architecture that restrict phase-outs.
CLOSE TO ALIGNED	International finance contributions approach meeting a fair share of support, including concessional financial support meeting more than 75% of fair share contribution to enabling the phase-out of production by Global South countries; OR provides most of needed finance but on non-concessional terms.
PARTIALLY ALIGNED	International finance contributions are part way to meeting a fair share of support, including support specific to enabling the phase-out of production by Global South countries.
UNALIGNED	International finance commitments come nowhere close to meeting a fair share of support BUT provides some financial or other support specific to enabling the phase-out of production by Global South countries
GROSSLY UNALIGNED	International finance commitments come nowhere close to meeting a fair share of support AND no financial or other support specific to enabling the phase-out of production by Global South countries.

B: Work with other governments towards a global oil and gas phase-out

FULLY ALIGNED	Is a Core Member of BOGA, has implemented their CETP commitment, and actively pushes fossil fuel phase-out in international negotiations.
CLOSE TO ALIGNED	Is an Associate Member of BOGA, has implemented their CETP commitment, and somewhat actively supports fossil fuel phase-out in international negotiations.
PARTIALLY ALIGNED	Is a Friend of BOGA, has committed to the CETP and somewhat actively supports fossil fuel phase-out in international negotiations
UNALIGNED	Has committed to the CETP and supports fossil fuel phase-out in international negotiations
GROSSLY UNALIGNED	International finance commitments come nowhere close to meeting a fair share of support BUT provides some financial or other support specific to Global South producers to help enable a phase-out of fossil fuel production.

6. Design fiscal terms to align investment behaviour with production decline goals

FULLY ALIGNED	Tax regime aims to disincentivise investment in excess of phase-out pathway, and to maximise public benefit from revenues during remaining years of production.
CLOSE TO ALIGNED	Tax regime aims to shift company behaviours towards managed phase-out (e.g. discouraging new field development; setting aside just transition funds).
PARTIALLY ALIGNED	Regulations, policy, and/or tax regime are mixed between some that disincentivise additional investment and some that are neutral; government is committed to removing subsidies including tax breaks and investment allowances.
UNALIGNED	Regulations, policy and/or tax regime aim at 'neutrality', neither encouraging nor discouraging investment.
GROSSLY UNALIGNED	Regulations, policy, and/or tax regime actively aim to encourage investment.

7. Adopt and implement just transition policies

FULLY ALIGNED	"Has policies, with credible implementation mechanisms, to deliver six key elements of a just transition, in the context of Paris-aligned phase-out: • Social dialogue on all transition-relevant policies with trade unions, community leaders, businesses, and other stakeholders; • Industrial policy to enable creation of high-quality new jobs in clean alternative sectors; • Local economic stimulus and plans to build vibrant, diversified local economies in regions currently dependent on oil and gas; • Legal protection of rights at work, both in declining oil and gas sector and in new sectors; • Social protection of workers and communities during the course of the transition; • Training provision to ensure workers have the skills to thrive in new sectors, and mechanisms to ensure transferable recognition of existing skills."
CLOSE TO ALIGNED	Performs very well on at least four or quite well on all six of the criteria listed under 'fully aligned'.
PARTIALLY ALIGNED	Performs quite well on at least three of the criteria listed under 'fully aligned'.
UNALIGNED	Has some plans on just transition, but well-short of alignment on most of the criteria listed under 'fully aligned'.
GROSSLY UNALIGNED	No plans for just transition for oil & gas workers or communities.

8. Regulation of environmental impact

A. Regulate greenhouse gas emissions from the production process

FULLY ALIGNED	There is a credible plan and strategy for reducing absolute scopes 1 and 2 upstream emissions of GHGs by at least 70% by 2030, compared to 2022 levels OR to reduce scopes 1 and 2 upstream GHG emissions intensity below 8kgCO_2e/boe by 2030; installations are subject to strict rules on GHG emissions, with strong verification measures and meaningful penalties; AND flaring and venting of gas are already prohibited, except in emergencies for safety purposes.
CLOSE TO ALIGNED	There is a credible plan and strategy for reducing absolute scopes 1 and 2 upstream emissions of GHGs by at least 60% by 2030, compared to 2022 levels OR credible intensity targets that would deliver commensurate absolute reductions; AND flaring and venting are to be prohibited no later than 2025 (except in emergencies for safety purposes).
PARTIALLY ALIGNED	There is a credible plan and strategy for reducing scopes 1 and 2 upstream emissions but with somewhat less stringent targets than 60% by 2030; OR there are voluntary, self-regulated targets to reduce emissions by at least 60% by 2030; AND flaring and venting are to be prohibited, but taking effect later than 2025.
UNALIGNED	There are voluntary, self-regulated targets for reducing scopes 1 and 2 emissions, but they are less stringent than 60% reductions by 2030; limited data publication.
GROSSLY UNALIGNED	No clear targets for GHG emissions reduction.

B. Protect ecologically valuable areas from oil and gas production

FULLY ALIGNED	All oil and gas activity is prohibited in all Marine Protected Areas and in buffer zones to an extent judged by experts to be sufficient in relation to the activity and threat; active process of identifying additional areas to become MPAs to achieve the Kunming-Montreal 30% target.
CLOSE TO ALIGNED	All oil and gas activity is prohibited in all Marine Protected Areas.
PARTIALLY ALIGNED	Oil and gas activity is prohibited in some Marine Protected Areas.
UNALIGNED	Oil and gas activity in Marine Protected Areas is strongly regulated to limit environmental impact, including strict rules and enforcement on pollution, noise, and seabed disturbance.
GROSSLY UNALIGNED	There are no laws or regulations in place to permanently protect ecologically-valuable areas from oil and gas production, and only poorly-imposed restrictions on oil operations in sensitive areas.

9. Plan for rapidly reducing oil and gas demand, in parallel with supply reductions

FULLY ALIGNED	Has a legislated process for creating and approving reductions in territorial emissions consistent both with Paris goals at a global level and faster phase-out in Global North, namely reaching zero emissions no later than 2035; process explicitly considers fossil fuel consumption, coordinated with policies to reduce supply.
CLOSE TO ALIGNED	Has a structured, ideally legislated, process for creating and approving reductions in territorial emissions with interim targets and a credible plan to reach zero fossil fuel emissions somewhat ahead of global averages for 1.5°C, namely no later than 2045.
PARTIALLY ALIGNED	Has a credible process and interim targets for reducing territorial emissions according to global averages without differentiation, with a net-zero emissions target not later than 2050 AND a plan to reduce oil and gas use by at least 75% by 2050.
UNALIGNED	Has a net-zero emissions target of no later than 2050, but without a credible process and interim targets; OR has a credible plan for reducing oil and gas use by at least 50% by 2050.
GROSSLY UNALIGNED	Has a net-zero emissions target beyond 2050 AND no credible plans to significantly reduce oil and gas consumption.

BOX 1: COUNTERING COMMON GOVERNMENT PITFALLS IN MEASURING PARIS-ALIGNMENT

Paris-alignment of production requires reduction across all scopes of emissions

The majority of states have some commitment to reduce emissions from oil and gas production, but restrict those to only scopes 1 and 2. Scope 1 covers emissions directly from the extraction facilities; scope 2 refers to the indirect emissions from generating electricity used in those facilities.[59] But these scopes 1 and 2 emissions comprise only a small percentage of the emissions from oil and gas production – a global average of 20 percent for oil and 15 percent for gas, according to the International Energy Agency (IEA).[60]

The overwhelming majority of emissions from oil and gas – over 80 percent – occur once oil and gas is burned for consumption (scope 3).[61] Hence policies to reduce production itself are more important than those related to reducing emissions from the production process.

Domestic production of oil and gas is not always preferable to imports

Some companies and policymakers suggest that domestic production avoids emissions caused by transport and, in the case of liquefied natural gas (LNG), by the processes of liquefaction and regasification.[62]

However, transport emissions are smaller than extraction-related process emissions;[63] this is true even when including the emissions of converting gas to LNG and back, which amount to three to 11 percent of lifecycle emissions.[64] From a climate and energy security standpoint, the most direct and effective way to reduce imported oil and gas would be to rapidly reduce oil and gas demand and transition to domestic sources of renewable energy.

Carbon Capture and Storage (CCS) plans from the oil and gas industry will not contribute to Paris alignment

A number of states' plans for keeping emissions in line with the Paris agreement rely on the large-scale use of CCS. CCS is incapable of addressing most oil and gas industry pollution (e.g. it cannot be applied to the tailpipes of vehicles), and the majority of existing CCS projects serve to boost oil and gas production.[65] The emissions that are most difficult to fully eliminate are those outside of the energy sector (eg, from cement production). Ultimately, the only way for the oil and gas industry to become Paris-aligned is to directly phase out its own emissions and production. CCS is not a legitimate excuse to delay a rapid phase-out of oil and gas.

Each decision's Paris-alignment should be assessed on its global impact and carbon lock-in risk

Many countries have taken the approach to take each decision regarding oil and gas on a case-by-case basis. Whilst this approach is not necessarily unreasonable, it depends heavily on how the country conducts assessments of its choices. For example, assessments that consider only scopes 1 and 2 emissions are inadequate, as are decisions that rest on some hypothetical assertion that if production did not occur domestically it would occur elsewhere.

The best practice is not to consider whether a project reduces emissions compared to some hypothetical, business-as-usual world, but rather if it increases emissions compared to a world in which the Paris goals are achieved; that is, where global CO_2 emissions reach net-zero by 2050.[66]

Assessments should also consider whether a project contributes to carbon lock-in or adds to transition risk.[67] This report finds that if countries properly conduct such assessments, the evidence will require that they not proceed with new oil and gas production, licensing, etc.

OIL AND GAS POLICY FRAMEWORK

Benchmark 1: Align policy framework with the Paris goals and COP28 agreement to transition away from fossil fuels.

Policy frameworks are a fundamental element of oil and gas governance. The objectives and the respective roles of state and private sector bodies are generally stipulated in legislation, whereas the strategy for achieving the objectives is fleshed out in non-legislated policy frameworks.

Climate goals will not be achieved by accident; they must be built into policy frameworks. Alignment of production with limiting warming to 1.5°C should be a legislated central goal, or a requirement of a government's oil and gas policy framework. Policy frameworks should also recognise the wider commitments of the Paris Agreement, including commitments to solutions that are equitable and just transitions, and to respect for the environment.[68]

In the recent COP28 agreement, governments committed to 'transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner'. Governments need to follow up on this agreement with a concrete policy framework to ensure that the agreement is translated into meaningful action.[69]

The framework should be clear and concrete. At a minimum, the policy framework should set clear limits to how much oil and gas the country can produce, and explain how policies will restrict and phase out production within those limits. In addition, it needs to have a clear plan for how the country will ensure the transition in a just, orderly, and equitable manner. Since the climate crisis is caused by the cumulative emissions of all countries, the assessment should place the country's oil and gas production in the global context. It should present clear assumptions on how global reductions in fossil fuel production are shared equitably between countries.

LICENSING ROUNDS AND AWARDS

Benchmark 2: End new licensing.

The first stage in the life of an oil or gas project occurs when a government awards a licence, giving a company rights to explore a defined area. This is the easiest stage at which governments can restrict fossil fuel supply, because companies and other stakeholders are not yet committed to development, and no legal right has been granted.

Restricting licences is particularly important because the world's existing fossil fuel reserves significantly exceed what can be extracted and consumed consistent with the Paris goals.[c,70] A 2021 study in *Nature* found that 60 percent of the world's known oil and gas reserves must remain unextracted in order to limit warming to 1.5°C.[71]

A licence gives companies and governments a strong incentive to commit to each stage of the oil and gas production process. The company will want to pursue the prospect of finding a commercially-profitable oil and gas field (and will often be legally obliged to do so, under a work commitment within its licence). To avoid creating incentives to further expand the global surfeit of fossil fuels, Paris-aligned governments should not award any new licences. Ideally, this imperative should be stipulated in legislation, to give clarity, consistency, and legitimacy to the policy, and should constitute a comprehensive prohibition on new licensing or licence extensions.

DEVELOPMENT CONSENTS

Benchmark 3: Stop approving new developments.

The highest degree of commitment to future production occurs once governments and companies have begun to invest very large amounts of capital in developing a field via building platforms, pipelines, and other facilities. At a company level, this occurs once a final investment decision (FID) is made; before this, a company must receive approval from a government, in the form of a development consent.

The science is clear that approving new oil and gas extraction conflicts directly with the goal of keeping global heating to livable levels. The first 1.5°C-aligned Net Zero Emissions (NZE) scenario from the International Energy Agency found that there is no need for new oil or gas fields[d] to be opened beyond those that were already producing or under development in 2021.[72,e] Peer-reviewed research led by Oil Change International further shows that already-operating and under-construction oil, gas, and coal extraction sites hold far more fossil fuel than can be extracted and burned under the 1.5°C limit. Extracting just the oil, gas, and coal within already-developed projects would cause 936 Gt CO_2 of pollution,[73] compared to a remaining allowable carbon budget as small as 210 Gt CO_2.[74] Thus, a majority of already-approved and producing extraction sites must be shut down early, before their reserves are fully extracted.

Any new fields that are approved and opened would add to the already-large excess of existing extraction that must be shut down early. Theoretically, a government could make approval of a new field contingent on the early closure of existing fields containing an equivalent or greater amount of

c Reserves are the known quantities of fossil fuel deposits that can be economically extracted with existing technology.

d To be more precise, no new oil and gas *projects* need be developed, where a project means a major capital investment requiring an FID. Some larger fields are developed in a series of phases, where each phase is a 'project' and is judged on its own merits, independent of decisions on future phases.

e This is because production from existing conventional oil and gas fields generally declines at about 4.5 percent per year, as reservoir pressures decrease, which is approximately the same as the rate of reduction of global oil and gas consumption in the 1.5°C scenarios.

Bert Kaufmann, Flickr (CC BY-NC 2.0 DEED)

oil and gas. But, in practice, this is unlikely to occur. Development of infrastructure has a powerful lock-in effect, due to the investment of large amounts of capital and the difficulty of revoking already-issued permits. Approving new fields could make it impossible to achieve the Paris goals, could require an incredibly rapid and socially-disruptive shutdown of existing infrastructure on the way to achieving them, or both.

Therefore, Paris-alignment means no further approving of development consents. In his Acceleration Agenda, the UN Secretary General calls on governments both to end new licensing and to stop expanding existing oil and gas reserves.[75]

OVERSEEING PRODUCTION AND COMPLIANCE

Benchmark 4: Establish and implement a Paris-aligned date to end oil and gas production.

Limiting warming to 1.5°C requires global CO_2 emissions to fall by 50 percent by 2030 compared to 2019 levels, and to reach zero emissions by around 2050.[76] Given that fossil fuels are the largest source of carbon pollution,[77] fossil fuel use and production must therefore also decline rapidly by 2030, and fall to near-zero by 2050.[f]

Whereas the global phase-out of oil and gas production must be largely complete by 2050, equity principles require that North Sea producers should phase out well before this – by the early 2030s – to avoid requiring more rapid phase-outs in the countries least able to accommodate them. North Sea countries need to implement an end-date with equitable differentiation, so it considers the country's responsibility to move faster than global average to phase out production.

One way to implement such a phase-out is to set a date by which production will end, providing market certainty and clarifying policy direction over the long course of the energy transition. Studies on other phase-outs (such as of coal power) and planned phase-outs (such as of sales of internal combustion engine cars) find that setting an end-date can have four positive effects:

- A clear policy signal: Companies know that the date is coming, and adapt their plans accordingly. [78]
- Time for the workforce to adapt, making a just transition possible.[79]
- Stimulation of innovation in alternatives, to capitalise on the opportunity provided by the end-date.[80]
- Minimisation of transition costs.

It is important to stress that an end-date in itself is not a plan for phasing out oil and gas production. The decision of implementing an end-date needs to be followed up with concrete policies and legislation to make sure that the phase-out is happening in a sufficiently fast, fair, funded, and planned way. In order to achieve end-dates aligned with equity, North Sea governments will need to proactively manage an early phase-out of already-operating fields. Thus, beyond ending new licensing and new field development, North Sea governments must start exploring policies and legal avenues to either renegotiate existing licences and production permits, revoke them, or both.

f While some governments and the fossil fuel industry suggest use of CCS could prolong fossil fuel use, this is a highly risky and dangerous proposition (see Box 2), and CCS cannot eliminate fossil fuel pollution. While CCS projects commonly target capture rates of 90 percent, such rates are rarely achieved in practice. Unless rates increase to 100 percent, CCS-equipped combustion of fossil fuels will still lead to residual emissions.

BOX 2: CARBON CAPTURE AND STORAGE, AND CARBON DIOXIDE REMOVAL

The premise of carbon capture and storage (CCS) is to capture CO_2 emissions from fossil fuel combustion, liquefy the CO_2, and inject it into the ground for storage. In practice, more than five decades of efforts to develop and deploy CCS have so far been largely unsuccessful.[81] Very few projects have been delivered, with global CCS capacity now amounting to just 0.1 percent of annual CO_2 emissions.[82] More than three quarters of operating carbon capture capacity globally sends captured CO_2 to produce more oil (a process called enhanced oil recovery), rather than to permanent and secure geological storage;[83] and many of the largest CCS projects have under-delivered, operating far below capacity.[84]

While the oil and gas industry heavily promotes CCS as a lifeline for its business model, and has lobbied aggressively for new public subsidies for CCS,[85] the world already has more viable and less costly means to reduce almost all fossil fuel pollution. Fossil fuels with CCS are a costlier means of generating power than renewable energy combined with storage (such as batteries),[86] and this is likely to remain the case as wind, solar, and battery costs continue to fall. Most energy sectors will be more efficiently and cost-effectively decarbonised by electrification combined with renewable generation. At most, potential roles for CCS exist in niche applications whose emissions are otherwise impossible to avoid, such as from the calcination reaction in cement manufacture.[87] Such applications would need to coincide with, and cannot substitute for, a rapid fossil fuel phase-out.

In theory, CCS can be combined with bioenergy combustion or with direct air capture (DAC) to remove and store CO_2 from the atmosphere. However, these novel carbon dioxide removal (CDR) technologies remain unproven at scale; pose considerable risks to communities; and could even cause more pollution than they remove.[88] Other forms of land-based CDR are not novel, such as CO_2 sequestration by forests, but run the risk of short-term impact if the forests are later cut down, or damaged by fire or disease, including due to the impacts of climate change.[89]

All forms of CDR face sustainability constraints: Bioenergy with Carbon Capture and Storage (BECCS) and forests compete for land with biodiversity and/or food production capacity;[90] and direct air capture (DAC) requires considerable additional energy.[91] In addition to preventing environmental and social harm,[92] governance of CDR would have to overcome serious challenges, including how to account for CO_2 removal, how to monitor and verify removals and long-term storage, and how to finance the processes.[93] For all these reasons, the future deployment of CDR remains highly uncertain.[94]

Even in a maximally-optimistic scenario, CCS and CDR cannot remove the need to phase out the production and use of fossil fuels.[95] Nor do they address the other non-climate harms from fossil fuels, such as health impacts, local environmental harm, and human rights violations. Insofar as companies and governments use CCS and CDR to justify new fossil fuel investments, they actively undermine the world's chances of curbing the climate crisis. There are even growing calls from CDR experts themselves to separate the ambition of emissions reduction from CDR, both directly in net-zero targets,[96] and indirectly in applying guidance from models.[97]

This report thus recommends a precautionary approach: Governments should proactively manage a phase-out of oil and gas production at the pace needed to hold warming below 1.5°C, without gambling on technologies that have a history of failure and only serve to prolong the health and safety risks of fossil fuels.

INTERNATIONAL COOPERATION

International cooperation plays an important role in Paris-aligned production policy. The climate crisis cannot be solved by any one nation on its own; cooperation between governments is crucial to the successful and equitable phase-out of fossil fuels, and the transition to renewable energy systems. This cooperation has two dimensions: for wealthy countries to meet their responsibility to provide adequate climate finance to Global South countries, including support to phase out the latter's production; and to demonstrate international leadership and influence other governments to phase out their production.

Benchmark 5a: Provide a fair share of climate finance and other support to Global South countries, including to phase out production.

The Paris Agreement stipulates that 'developed country Parties shall provide financial resources to assist developing country Parties', including 'a significant role of public funds', to be based on recipient countries' strategies, priorities, and needs.[98] The failure of rich countries to deliver their fair share of climate finance is a major barrier to stronger global cooperation on climate and the rapid phase-out of fossil fuels.

Much of the narrative of climate negotiations has focused on Global North governments' failure, as of 2020, to deliver the USD 100 billion a year of climate finance for mitigation and adaptation these governments had promised in 2009. However, the estimated scale of international support needed in Global South countries to address the climate crisis, and the fair shares owed by Global North governments, is much higher than this amount. The necessary support includes finance to reduce climate pollution (mitigation); to transform energy systems, including phasing out fossil fuel production; to adapt to climate impacts; and to pay for the growing loss and damage caused by the climate crisis.

There is no consensus estimate of the total climate finance needed by and owed to Global South countries, and we do not attempt to suggest a definitive estimate here. An independent study commissioned through the UN process concluded that USD 1 trillion per year of climate finance will be required by 2030 in emerging markets and developing countries (excluding China) for mitigation, adaptation, and loss and damage.[99] This is likely a lower-bound estimate of the realistic need. Recent studies put median estimates for annual loss and damage costs and adaptation finance needs of developing countries at USD 671 billion[100] and USD 387 billion[101] per year, respectively, in 2030. These estimates alone top USD 1 trillion, even before considering financial support for Global South countries' mitigation and fossil fuel phase-out needs. A peer-reviewed assessment published in *Nature* calculates that rich countries owe USD 6.2 trillion a year in financial compensation to Global South countries for polluting the atmosphere far beyond the former's fair share.[102]

In this benchmark, we rate countries according to whether their overall international climate finance is on a scale approaching their fair share towards a lower-bound estimate of the global annual need by 2030, taken in this case as USD 1 trillion. To project each country's indicative 'fair share' under this low-end estimate, we apply the same 'fair share' allocations as used by the Overseas Development Institute (ODI) to assess rich countries' responsibility for delivering their initial USD 100 billion target.[103] We further assess whether that finance includes targeted additional support to enable Global South countries to phase out production.

International funding to enable Global South countries to phase out fossil fuel production is vital, and Global North countries need to provide this in addition to financial support for adaptation, loss and damage, and other mitigation efforts. This is needed for reasons both of fairness and of practicality. Practically speaking, without international support, a global solution will not be possible: Global South countries are at present being structurally deprived of the resources and policy tools required to fund a just transition and build renewable-based economies while continuing to meet urgent development needs. This is particularly true where that transition is made difficult by high levels of dependence on oil and gas export.

A 2023 report by the Civil Society Equity Review estimates that Global South countries with the least capacity to manage a production phase-out will require support in the order of hundreds of billions of dollars per year – at a very minimum – on top of other mitigation, adaptation, and loss and damage costs.[104] The report underscores that the total is reasonably expected to be in the trillions of USD per year in aggregate. Economic diversification requires investment in new sectors; infrastructure; education; public health; and innovation.[105]

To be fully aligned on this benchmark, North Sea governments must also be actively providing non-financial forms of support to help enable a just energy transition in Global South countries, including making terms of trade fairer, cancelling debt, terminating punitive trade and investment agreements, freeing access to publicly beneficial technologies, and using their 'voice and vote' at multilateral institutions to support reforms for fair global financial rules.[106] In 2023, over 200 civil society organisations issued an open letter calling on world leaders to transform public finance and mobilise 'new, additional, and predictable public funding for a just transition on the scale of trillions per year, with Global North governments paying their fair share on fair terms'.[107] Regarding fair terms, it is critical that Global North countries and other sources provide this finance in a way that allows Global South countries to lead their

own strategies and plans; upholds human rights; and prioritises grants rather than adding to often-crippling existing debt levels.

Benchmark 5b: Work with other governments towards a global oil and gas phase-out.
Another means by which governments can help make a phase-out global is by encouraging others to follow their lead. There are two key diplomatic initiatives to provide fora for governments to endorse and implement new global norms towards phasing out oil and gas production as well as international public finance for fossil fuels.

The Beyond Oil and Gas Alliance (BOGA), launched in 2021, is the first alliance of governments dedicated to phasing out oil and gas. It was established 'to elevate the issue of oil and gas production phase-out in international climate dialogues, mobilise action and commitments, and create an international community of practice on this issue'.[108] BOGA presently involves 24 governments: 15 Core Members, two Associate Members, and seven Friends of BOGA. Core members are required to commit to end oil and gas licensing and to set a Paris-aligned phase-out date. BOGA provides an important platform to show leadership, influence international debates, encourage other governments, and contribute to making fossil fuel phase-out a global norm.[109]

The Clean Energy Transition Partnership (CETP, sometimes referred to as the Glasgow Statement), also launched in 2021, is a joint commitment of governments and public finance institutions to end new direct international public finance for fossil fuels, and instead prioritise public finance for renewable energy.[110] As of the start of 2024, the CETP had 41 signatories,[111] and prior to the initial deadline for implementation it was already shifting USD 6.5 billion a year out of fossil fuels and USD 5.2 billion a year into clean energy.[112] If all signatories were to fully implement their commitments, including their promise to cement these commitments into other international policy processes (such as the Organisation for Economic Co-operation and Development (OECD) Arrangement on Export Credits), they could collectively shift over USD 40 billion per year in influential government support away from fossil fuels and into clean energy.

In addition, there is the Fossil Fuel Non-Proliferation Treaty (FFNPT) initiative, launched in 2020, which aims to build diplomatic support for negotiating a binding treaty among governments to end the expansion of new oil, gas, and coal projects; and manage a global transition away from fossil fuels.[113] The call for a Fossil Fuel Non-Proliferation Treaty has been endorsed by several governments and hundreds of elected officials across the world.[114]

FISCAL TERMS AND INVESTMENT INCENTIVES

Benchmark 6: Design fiscal terms to align investment behaviour with production decline goals.
As noted above, geological resources of oil and gas are legally owned by the state. Oil and gas fiscal systems aim to capture some of those resources' value for the state when they are extracted; they do this through corporation taxes, special petroleum taxes, royalties, state shares, participation of national oil companies, or some combination of the above.[115]

Fiscal systems are judged 'neutral' when investment decisions are the same as they would be if there were no tax (that is, when the oil price needed to develop each field is unchanged).[116] Some governments may maximise their share of the revenue, which may deter investment. Or they may set taxes below the neutrality point, to specifically attract or stimulate investment. To encourage the latter course, international oil companies commonly warn governments that they may take their investment elsewhere unless the terms are made more profitable for them. When governments heed this call, it can lead to a race to the bottom, where governments compete to accept ever lower shares of revenue.

As a tool of environmental policy, fiscal measures are commonly used to incentivise positive company behaviours and disincentivise negative ones; for instance, introducing a carbon price or removing fossil fuel subsidies.[117] In the case of Paris-aligned oil and gas policy, higher fiscal take can both deliver greater state revenues and shift investment patterns towards Paris-alignment.

A first step towards Paris-alignment will be to remove the aforementioned and other fossil fuel subsidies, such as tax breaks for exploration or new field development. Globally, government subsidies continue to incentivize fossil fuels, with G20 countries alone spending USD 440 billion to drive investment in new fossil fuel production in 2022.[118]

More broadly, increasing the state share of revenue will have three benefits for supporting a rapid and equitable phase-out of production:

- Maximising public income from the diminishing remaining production will free up funds to invest in a just transition for workers and communities;[119]
- Disincentivising new and ongoing investment[g] will deter the development of new fields (if not already prohibited per Benchmark 3), and extraction from existing fields will be reduced, bringing production closer towards Paris-aligned levels; and
- With less capital locked up in existing fields, the eventual end of production will become easier, by decreasing stranded assets and resistance to field closure.

g Whilst an FID is the largest investment decision on a fossil fuel project, as it determines whether to proceed at all with the project, smaller capital and operational decisions are made throughout a project's life. Thus while production from an existing conventional field will generally decline at about 4.5 percent per year with ongoing investment in the field, without the investment the decline rate generally accelerates to 8 percent or more (IEA 2021, p. 101).

Paris-aligned fiscal policy, then, should seek to disincentivise new investment, so as to encourage a managed decline of production consistent with the 1.5°C goal. A good example of states moving in this direction is the windfall taxes applied by some countries in response to high energy prices. Paris-alignment suggests a need to make such measures systemic rather than one-off.

EMPLOYMENT

Benchmark 7: Adopt and implement just transition policies.

Governments' role in overseeing employment in ordinary oil and gas operations has both regulatory components (such as those regarding safety and industrial relations) and enabling components (such as training). The Paris Agreement recognises 'the imperatives of a just transition of the workforce and the creation of decent work and quality jobs'.[120]

Several studies have found that renewable energy generally creates more jobs per unit of energy than fossil fuels.[121] However, renewable energy jobs will not always be in the same place as fossil fuel jobs, nor require the same skills; hence existing workers will face disruption and potential job losses.[h] This will also cause significant disruption to those with jobs indirectly related to the oil and gas industry, and those in precarious work in jobs that are only sustained as a result of the financial impact of the oil and gas industry[122].

Born from the trade union movement in the 1970s, the idea of a just transition began as the principle that workers should demand and lead changes in their industries to prevent environmental harm, without negatively impacting their employment and the economic futures of their communities.[123] Broader definitions involve the transformation of the unjust and destructive energy and economic systems into regenerative, equitable, and democratic models that ensure collective well-being for people and nature.[124,125,126]

As North Sea countries transition away from fossil fuels, they must ensure that their policies address the impacts of this transition in order to enable a just transition.

For the purposes of this report, we are focussing on the domestic aspects of a just transition for workers and local communities currently dependent on the oil and gas sector. Per the International Labour Organisation (ILO) definition, a just transition necessitates 'greening the economy in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities, and leaving no one behind'.[127]

The elements of a just transition are defined in ILO Guidelines,[128] and generally include:

- Social dialogue on all transition-relevant policies with workers, employers, and other stakeholders;
- Industrial policy to enable creation of high-quality new jobs in clean alternative sectors;
- Local economic stimulus and plans to build vibrant, diversified local economies in regions currently dependent on oil and gas;
- Legal protection of rights at work, both in the declining oil and gas sector and in new sectors;
- Social protection of workers and communities during the transition; and
- Training provisions to ensure workers have the skills to thrive in new sectors, and mechanisms to ensure transferable recognition of existing skills.

Paris-aligned policy will include clear plans to deliver these elements of a transition, developed through inclusive consultation and collaboration with trade unions, community leaders, and other stakeholders. Offshore oil and gas workers in the UK have come together to produce 10 demands for a just transition, covering aspects of transition, worker rights, and the future energy system.[129] Meanwhile, a growing body of experience suggests how just transitions can be delivered in practice.[130]

REGULATION OF ENVIRONMENTAL IMPACT

Governments regulate the environmental impact of oil and gas operations, including their greenhouse gas (GHG) emissions and their more localised environmental impacts.

Benchmark 8a: Regulate greenhouse gas emissions from the production process.

The largest portion of scopes 1 and 2 emissions in North Sea oil and gas production comes from flaring excess gas (burning it, which creates CO_2), venting it (controlled release of unburned gas, consisting mainly of methane, usually for safety reasons), or from accidental leakage.[131] Therefore one of the most effective steps regulators can take, alongside phasing out fossil fuel production, is to prohibit all flaring and venting. In 2015, the World Bank set a target of Zero Routine Flaring worldwide by 2030.[132] As wealthy countries with mature oil and gas industries, extensive infrastructure, and nearby gas markets, Paris-aligned North Sea producers should end flaring and venting significantly earlier than this, and rapidly reduce production-related emissions as part of comprehensive phase-out plans.

The IEA's net-zero emissions (NZE) scenario provides an indication of global benchmarks that North Sea countries should be planning to meet and exceed. In the NZE scenario, global scope 1 and 2 greenhouse gas emissions from upstream oil and gas extraction should fall by more than 70 percent by 2030, compared to 2022 levels.[133] This is achieved by a reduction of more than 60 percent in the global emissions intensity of upstream production, combined with a 20 percent reduction in absolute production. At the same time, the IEA's analysis recognizes that

h Furthermore, renewable energy jobs may be of lower quality in pay and conditions than oil and gas jobs, where standards of employment have been improved through decades of trade union organising.

producers that already have the world's lowest relative emissions intensity may not be able to achieve large-scale additional absolute reductions. In this regard, the IEA suggests that targets to reduce intensity at or below current global 'best practice' would also be Paris-aligned. This suggests a threshold of 8 kilograms (kg) CO_2-equivalent (CO_2e) emissions per barrel of production as the best practice to achieve by 2030.[134] On the basis of equity, North Sea countries should be aiming to exceed today's global best practice by 2030, in order to phase out production in the early 2030s.

To ensure effective reductions and public confidence in the system, there must be a robust regulatory system, including monitoring, verification and transparent publication of emissions at each installation, and penalties for non-compliance.

Benchmark 8b: Protect ecologically-valuable areas from oil and gas production.

The Paris Agreement recognises 'the importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity'.[135] A 2023 report by climate justice groups Uplift and Oceana reviews and summarises the scientific evidence on the worldwide offshore oil impacts of UK operations, including on keystone species in the North Sea environment.[136] These impacts include:

- Noise: The loud blasts of seismic testing harm various animals, but especially cetaceans, for whom it can cause hearing loss, damage to their navigation and communication functions, and behavioural changes, including reduced feeding.[137] Seismic surveys can affect cetacean behaviour at a distance of up to 12 km away from the source.[138]
- Seabed damage: Installation of platforms, pipelines, and other infrastructure causes habitat loss for benthic organisms.[139] Drill cuttings (rock fragments) dumped on the seabed cause smothering.[140]
- Chemical pollution: Pollution from oil operations causes widespread harms to a range of marine wildlife.[141] In addition to risks of lower-likelihood but catastrophic large-scale spills, there are severe chronic impacts from frequent small leaks and spills,[142] and from routine discharges. Produced water (water extracted from oil reservoirs along with oil) accounts for the majority of discharges.[143]

Whilst these impacts can be damaging anywhere, they can have a particularly severe effect in Marine Protected Areas (MPAs), which are the principal tool for protecting marine biodiversity in the oceans. MPAs contain vulnerable, rare, or important wildlife populations; support biodiversity in a wider marine area (for example as in the establishment of zones where fish populations can recover); or both.[144] According to the International Union for the Conservation of Nature, an international expert organisation, 'Any industrial activities and infrastructural developments (e.g. mining, industrial fishing, oil and gas extraction) are not compatible with MPAs and should be excluded from such areas if they are to be considered as MPAs'.[145]

Governments should prohibit oil and gas production from either new or existing licences in sensitive areas and in buffer zones around them, the size of which depends on the activity and the wildlife affected. For example, sources of pollution should be kept at least two kilometres from vulnerable habitats.[146]

INTEGRATED ENERGY POLICY

Benchmark 9: Plan for rapidly reducing oil and gas demand, in parallel with supply reductions.

Policymaking on oil and gas production is commonly integrated with consideration of a given country's energy needs, and often takes place in the same ministry of energy. In the context of energy transition, integrated planning is crucial to avoid disruptions.

If climate policy were to restrict only fossil fuel supply, the effect would be to push up prices, which can have negative social impacts, especially on those in energy poverty. Instead, a planned approach should tackle the whole energy system in a coordinated way to ensure that all elements of the system are undergoing a transition at the appropriate pace. The most efficient policies are those that coordinate action on supply and demand to avoid the problem of emissions leakage.[147]

For the largest uses of oil and gas – car transport and power generation, respectively – clean alternatives are readily available and generally cheaper,[i] and several North Sea countries already have plans to phase out these uses of oil and gas, mostly by 2030 or 2035. For most uses of gas, alternatives are already cost-competitive, and for other uses, they will become competitive in the coming years.[148] In addition to transitioning to new technologies, increased efficiency and expansion of public infrastructure to enable behaviour changes (for example, better home insulation and public transport) can significantly reduce energy use.

The IEA's 1.5°C-aligned scenario requires global oil and gas use to fall by close to 20 percent by 2030, and by 78 percent by 2050.[149] More broadly, the Intergovernmental Panel Climate Change finds that limiting warming to 1.5°C requires global CO_2 emissions to reach net-zero by around 2050.[150]

While a number of governments have set 'net zero' emissions targets, such targets are only effective insofar as they include concrete plans to phase out the largest cause of carbon emissions – namely fossil fuels – on a comparable timeframe.[151] This is the most precautionary approach, given the non-climate harms of fossil fuels, and the failure

i Respectively on a total cost of ownership and a levelized cost of energy basis.

and feasibility risks of carbon capture and removal technologies (Box 2). When accounting for equity, Global North countries will need to reduce oil and gas usage and to zero out fossil fuel emissions faster than global averages.

This implies that to limit warming to 1.5°C with a fair sharing of efforts, Global North countries should phase out oil and gas use, and reach zero fossil fuel emissions, well before 2050. A peer-reviewed paper in the journal *Climate Policy* focusing on the UK and Sweden found that limiting warming to 1.7°C with 50 percent probability of success would require the two countries to bring forward their net-zero dates to between 2035 and 2040. This was calculated assuming a precautionary approach of not relying on unproven carbon-dioxide removal, and fairly sharing carbon budgets between the world's countries.[152] Limiting warming to 1.5°C would require even faster action. Thus, to be fully aligned, North Sea countries should be aiming to phase out their oil and gas use and production on comparably rapid timelines – before 2035.

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4. NORWAY

Norway is by far the largest North Sea producer, producing three times as much oil and gas as the UK in 2023; and the only country in which production is on a pathway to increase rather than decline between 2023 and 2030. Production is split relatively evenly between oil and gas. Norway is Europe's largest producer and exporter of oil and gas, and its oil and gas exports make Norway one of the world's top exporters of fossil fuel emissions.[153]

Although oil production is in a slow structural decline, this decline is being postponed and even reversed by exploration for and development of new oil and gas reserves. Norway threatens to be the world's 12th largest developer of new oil and gas fields through 2050.[154] Approval of new fields and licensing could increase the cumulative global carbon pollution caused by remaining Norwegian oil and gas production by nearly 75 percent between now and the end of the century (Table 2). Keeping Norway's undeveloped oil and gas in the ground would help prevent 4.8 Gt of carbon pollution (Table 2), which is almost 100 times Norway's domestic greenhouse gas emissions in 2022.[155]

To enable an equitable global phase-out of extraction, Norway should be aiming to phase out its oil and gas production by the early 2030s. As Figure 8 illustrates, this would require the government to accelerate the decline of production from existing fields whilst foregoing any permitting or licensing to exploit new oil and gas. If new field development and licensing continues, the carbon pollution from Norway's oil and gas production is projected to increase slightly to 2030. This would be the case even if licensing ceased immediately, because new licences are not expected to result in new production until after 2035. Thus, ending new field development is critical for beginning to align Norway's production with a 1.5°C trajectory during this decade.

Benchmark 1: Align policy framework with the Paris goals and COP28 decision on transition away from fossil fuels.
Norway's policy framework is not aligned with the Paris goals, and the country has no plan for ensuring a transition away from fossil fuels that encompasses the entire economy in a just and equitable way.
We find that Norway rates 'Grossly Unaligned'.

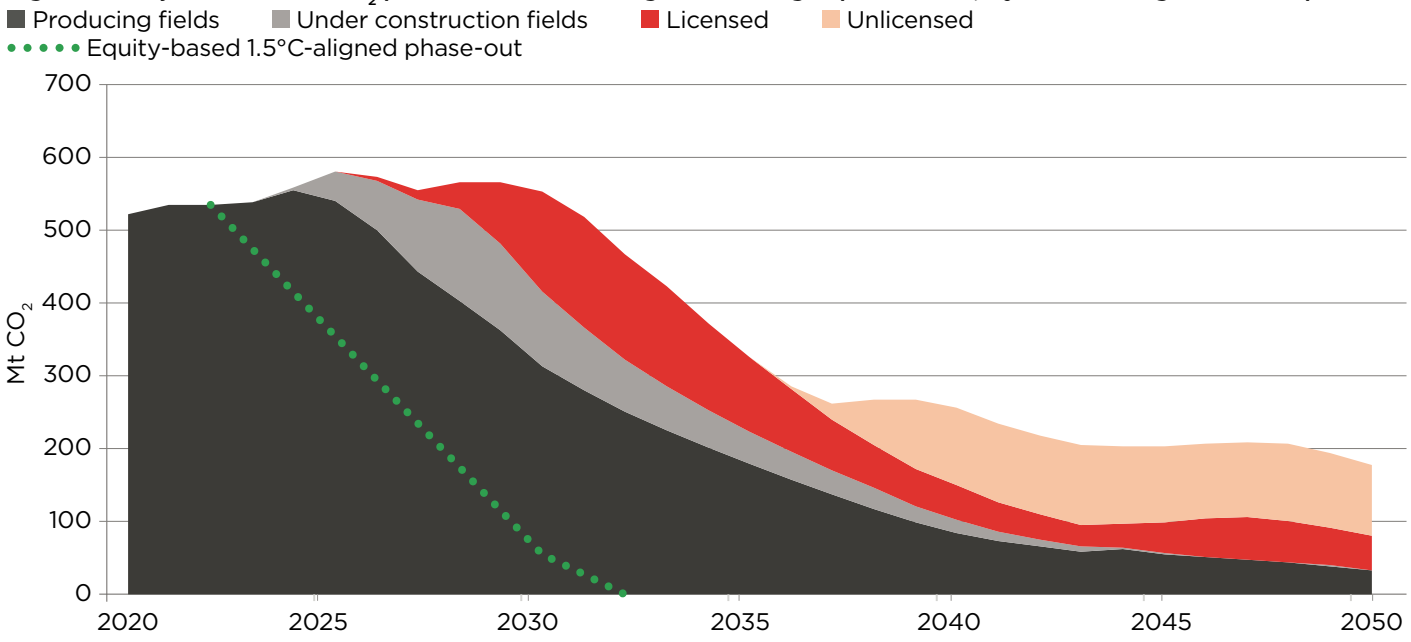
The key regulators for the oil and gas industry in Norway are the Norwegian Offshore Directorate and the Norwegian Ocean Industry Authority. They are supervised by the Ministry of Energy and the Ministry of Labour and Social Inclusion.

The Norwegian Environmental Agency (NEA) is the primary environmental and climate regulator for petroleum activities in Norway; this regulation is achieved through legal regulations and permissions.

The **Petroleum Act** (1996) lays out the requirements for impact assessments in the Plan for Development and Operation (PDO) and Plan for Installation and Operation (PIO), as well as the environmental requirements that the NEA obliges operators to comply with in relation to licences.

The **Pollution Control Act** (1981) forms the legal framework for all emissions to the natural

Figure 8: Projected annual CO_2 pollution from Norwegian oil and gas production, by current stage of development



Source: Oil Change International analysis of data from the Rystad Energy UCube (January 2024), Civil Society Equity Review[156]

environment, stipulating that all activities that can or will cause pollution must be given permits by the NEA. A key principle of the Pollution Control Act is the use of Best Available Techniques – this means that the levels of pollution allowed via a permit are set by what can be achieved through best-practice techniques and methods.

Norway has several environmental and climate regulations for its oil and gas exploration and production, but these only address scope 1 and 2 of emissions related to the oil and gas industry.[157]

In Norwegian oil and gas legislation and regulations, there is no reference to aligning production to the Paris Agreement. There is also no framework in place that sets a limit for how much oil and gas Norway can produce, or how restrictive policies should limit emissions.

After the Supreme Court ruling in a lawsuit filed by Greenpeace Nordic and Young Friends of the Earth Norway against the 23rd licensing round in Norway,[158] the Ministry of Energy had to adjust the processing of new oil and gas projects.[159] Even though the Supreme Court rejected the appeal, and upheld the licences for offshore drilling, they found that oil and gas projects must take into account global climate effects, i.e., the amount of greenhouse gas emissions the oil will cause even when it is burned abroad. They concluded that this assessment should be made when the Ministry of Energy is deciding whether to approve the PDO.

An assessment of the emissions from Norwegian oil and gas exported abroad was made public in 2022, and is based on a highly-critiqued study from Rystad Energy that found that increased Norwegian oil and gas production would lead to lower global emissions.[160]

Oil Change International (OCI) submitted a response to the study, highlighting the questionable and precarious assumptions used to reach its conclusion.

Despite this, the Norwegian Ministry of Energy uses the Rystad study when assessing if new field development will lead to an increase in global emissions, and to date it has not found that any new fields will lead to an increase in global emissions. This is the closest there is to any form of global climate assessment in Norway. The ministry also conducts a qualitative risk assessment of financial climate risk within a 1.5°C scenario, but this assessment is not open to the public.

Benchmark 2: End new licensing.
There are active programmes on ongoing licensing without consideration of Paris-consistency, and there are no plans to limit licensing rounds, either temporarily or permanently. ***We find that Norway rates 'Grossly Unaligned'.***

Norway's policies fail to take climate change into consideration in legislating licensing rounds; and oil and gas companies are not asked to include any climate-related considerations in their licensing bids.[161]

Licences can be awarded through two types of licensing rounds:

- **Numbered rounds** occur every other year for challenging frontier areas. Operators will nominate areas they are interested in exploring to the Petroleum Directorate, who will make recommendations to the Ministry of Energy for decisions.

- **Awards in Predefined Areas (APA) rounds** occur annually and are for all areas within a predefined set of blocks. These are supposed to be mature areas that have already been operated in for many years with well-developed infrastructure. The government decides which APA areas are included in each round.

Norway is Europe's leading explorer for more oil and gas. Each year the government issues at least one new licensing round, and a study from OCI revealed that in the 10 years from 2012-2021, Norway issued as many licences (700) as in the 47 years prior. In this period, new licences issued by Norway opened up 2.8 billion barrels of new oil and gas resources for potential extraction, almost 3.5 times more than Europe's second-largest producer, the UK.[162]

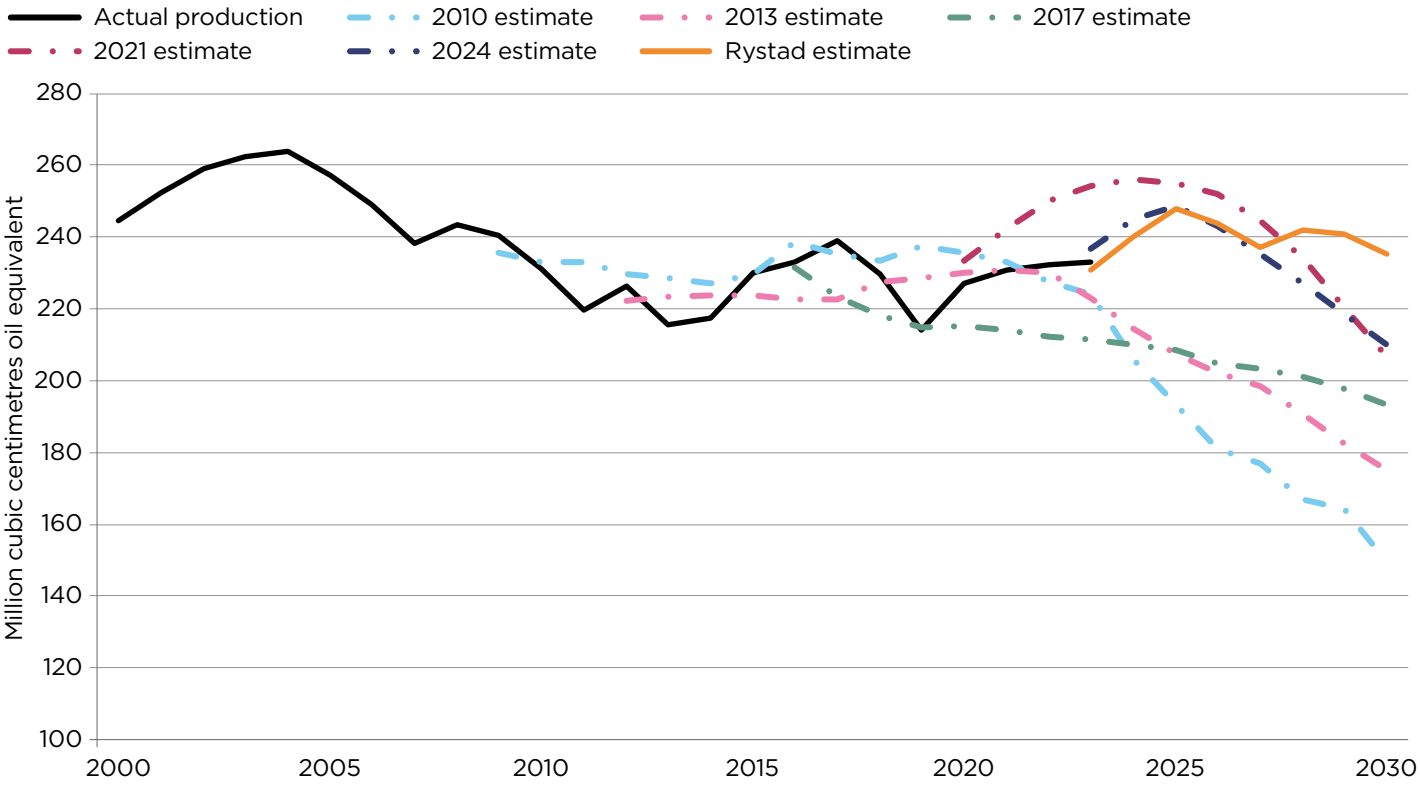
In an agreement between the current minority government and its supporting party, the Socialist Left Party, new licensing in frontier areas through the numbered licensing rounds has been suspended until the end of the current parliamentary period in 2025.[163]

In October 2023, the government-appointed 2050 Climate Change Committee, made up of independent experts, recommended that the Norwegian government should develop a strategy for the final phase of Norwegian oil and gas production, and submit it to Parliament, as soon as possible. They further recommended that no further permits be granted for the exploration and extraction of oil and gas until such a strategy has been completed. In addition, the committee recommended a permanent ban on exploration activities in areas without a direct connection to existing infrastructure. When confronted with the recommendations, the Norwegian Energy Minister rejected any changes to the country's licensing policy.[164]

In its governing platform as well as elsewhere, the Norwegian government has frequently stated that it wishes to further 'develop, not wind-down' the oil and gas industry.[165]

Norwegian governing parties continue to argue that the oil and gas industry will phase itself out due to the structural decline of oil and gas in Norway and due to demand restrictions.[166, 167, 168] The Norwegian government's official estimates for oil and gas production anticipate an 11 percent decline between 2023 and 2030, whereas Rystad projects a 2 percent increase. However, the government has a track record of projecting steep declines to 2030, using these projections to justify aggressive exploration policies, and then revising projections upward due to the resulting new field discoveries and developments. As shown in Figure 9, the government's 2024 estimate for 2030 production is 40 percent higher than its estimate as of 2010.

Figure 9: Norwegian government's official estimates for oil and gas production over time, compared to Rystad estimates



Source: Norwegian state budgets (2010, 2013, 2017, 2021[169] and 2024[170]), Rystad Energy UCube (January 2024)

Benchmark 3: Stop approving new development.

There are no restrictions on granting new development consents to new oil and gas fields in Norway.

We find that Norway rates 'Grossly Unaligned'.

Production licences give a company exclusive rights to explore and operate in specific areas, and are awarded on the basis of technical competence, financial capacity, and exploration and extraction plans. A licence is initially awarded for 10 years reserved for exploration, with an option to extend the licence to 30 years if exploration is successful.

Before operations can begin, the licensee must submit a Plan for Development and Operation (PDO), and companies must put forward a Plan for Installation and Operation (PIO). The PDO and PIO consist of a plan and assessment of what impact the activities will have for the environment, fisheries, and society at large. They must also comply with the Petroleum Act and petroleum regulations.

Norway sanctioned and approved a record amount of new oil and gas development since 2020, with a staggering 35 projects greenlighted, most of which were approved in 2022.[171] The clear majority of these came as a direct consequence of temporary changes to the tax regime following the first year of the Covid-19 pandemic in 2020 (described in Benchmark 6), despite the clear message from the IEA that there should not be any new oil and gas fields, or new investments, beyond what was already committed as of 2021.

Greenpeace Nordic and Young Friends of the Earth Norway have recently filed a new lawsuit against the Norwegian government over the latter's approval of three new oil and gas fields (Breidablikk, Yggdrasil and Tyrving).[172] The organisations believe that the state has violated Norwegian law and the requirements of the Supreme Court by failing to assess the climate impact of approving three new oil and gas fields in the North Sea.[173] The judgement delivered in January of 2024 by the Oslo District Court found the approvals of all three oil and gas fields invalid and issued an injunction forbidding the state from granting any new permits for construction and production from these fields.[j] The Norwegian Ministry of Energy has appealed the decision.

Benchmark 4: Establish and implement a Paris-aligned date to end oil and gas production.

Norway does not have a date for an end to oil and gas production, nor is it planning on setting one.

We find that Norway rates 'Grossly Unaligned'.

Of the nine parties currently represented in Parliament, only one supports an end-date for fossil fuel production in Norway. After the 2050 Climate Change Committee made their recommendation that Norway should develop a strategy for the final phase of Norwegian oil and gas production as soon as possible, this sole party received a massive backlash from both the government parties and the leading opposition parties.

Benchmark 5a: Provide a fair share of climate finance and other support to Global South countries, including to phase out production.

Although Norway's climate finance dedicated to mitigation and adaptation compare favourably with many other Global North countries, international finance commitments come nowhere close to meeting their fair share of support, and include no financial or other support specific to enabling the phase-out of production by Global South countries.

We find that Norway rates 'Grossly Unaligned'.

At the UN Climate Change Conference in Glasgow in 2021 (COP26), Norway pledged to double its annual climate finance from NOK 7 billion in 2020 to NOK 14 billion by the end of 2026, a target they claimed to reach in 2022 through leveraging more private capital.[174] Notably, 9.2 billion NOK is public capital and 5.6 billion NOK is private capital[175] — an approach to climate finance that risks exacerbating the debt crises that are driving fossil fuel production.[176]

Analysis by the Overseas Development Institute (ODI) ranks Norway as having contributed its fair share towards the annual USD 100 billion of climate finance that Global North countries committed to mobilise by 2020, based on Norway's historical responsibility for cumulative climate pollution, gross national income, and population size.[177]

However, Norway's commitments are far too weak compared to the scale of the global need. To meet its fair share of a conservative estimate of USD 1 trillion in international finance for mitigation, adaptation, and loss and damage required annually by 2030, Norway would need to provide finance on an order of USD 6.4 billion (NOK 67 billion[178]) annually by 2030, if using ODI's approach to allocating fair shares between rich countries.[k] As noted in Section 3, this is meant to be indicative of the scale of additional effort required, not a definitive estimate of Norway's obligations. A 2018 study by the Stockholm Environmental Institute (SEI) found Norway's fair share of international finance for mitigation and adaptation to be on a similar scale of over USD 7 billion each year to 2030.[179]

Norway has no climate finance that is earmarked for supporting the phasing out of fossil fuel production in Global South countries. The 2023

j Specifically, the court ruled that section 20 et seq. of the Petroleum Regulations, which provides the requirement on impact assessments, must be interpreted in light of Article 112 of the Norwegian Constitution. It referred to the 2020 Supreme Court decision that found that Article 112 should cover both emissions from the production and consumption of petroleum, even if it is combusted outside of Norway. The Court found that the State must assess the real impact of both forms of greenhouse gas emissions resulting from the development and operation of petroleum deposits before approving oil and gas fields, and that a real test must be carried out of whether approval would be contrary to Article 112 of the Norwegian Constitution.

k Based on Norway's historical responsibility for cumulative climate pollution, gross national income, and population size, ODI finds Norway's fair share towards Global North countries' existing USD 100 billion commitment to be 0.64%. We apply this same fair share allocation to USD 1 trillion as indicative of the scale-up in support required.

Civil Society Equity Review report on the equitable phase-out of extraction suggests that Norway's fair share towards financing a production phase-out globally would be an additional USD 1.9 billion per year (NOK 20 billion), based on Norway's economic capacity and historical responsibility.[180]

Instead, Norway has previously actively supported oil and gas production in the Global South through the program 'Oil for Development'. The goal of the program was to focus on 'capacity-building in the areas of mapping, exploration, extraction, and production of petroleum resources' in Global South countries.[181] The program was established in 2005. In 2021, the government decided to phase the program out.[182]

Taken together, minimum estimates of Norway's fair share of finance towards mitigation, adaptation, loss and damage, and extraction phase-out add up to USD 8.3 billion (over NOK 85 billion) annually by 2030 – six times the size of Norway's commitment of NOK 14 billion by 2026.

Benchmark 5b: Work with other governments towards a global oil and gas phase-out.

Norway has committed to the CETP and supports fossil fuel phase-out in international negotiations, but is not actively working with other governments towards a global oil and gas phase-out. ***We find that Norway rates 'Unaligned'.***

Norway is not a member of Beyond Oil and Gas Alliance (BOGA) in any capacity, nor has it endorsed the call for a Fossil Fuel Non-Proliferation Treaty. At the international climate negotiations, Norway supported implementing language on phasing out unabated fossil fuels, and has done so since COP26 in Glasgow 2021. At COP28 in Dubai, Prime Minister Jonas Gahr Støre called on countries to join efforts to 'phase out use of unabated fossil fuels',[183] and Norway was key in negotiating an agreement at COP28 that called for transitioning away from fossil fuels.[184,185]

Norway joined the Clean Energy Transition Partnership (CETP) at COP28.[186] This came after strong pressure from civil society starting when the partnership was launched at the Glasgow summit in 2021. Eksfin, the Norwegian export credit agency, provided USD 642 million per year for fossil fuels between July 2021 and July 2023, and thus civil society now expects Eksfin to move away from all future financing of fossil fuels[187]. So far, it is unclear how Norway will implement the CETP.

Benchmark 6: Design fiscal terms to align investment behaviour with production decline goals.

The current system aims at 'neutrality', meaning that an investment that is profitable before taxation also should also be profitable after taxation. This system neither encourages nor discourages investment. ***We find that Norway rates 'Unaligned'.***

Oil and gas production is taxed in a number of ways in Norway. The total tax rate for the oil and gas sector is 78 percent. This is made up of:

- **Ordinary corporate tax:** Companies involved in oil and gas production pay the regular corporate income tax rate of 22 percent on their profits.
- **Special tax:** In addition to regular income tax, there is a resource rent tax of 56 percent. This tax is specifically targeted at companies benefiting from the extraction of valuable natural resources like oil and gas.

In addition, the oil and gas industry pays both a national carbon tax and a NOx tax. Both are described in Benchmark 8a.

There are also tax regulations that are more favourable for the oil and gas industry. These include:

- **Cash-flow based taxation:** In 2022, a cash-flow-based tax system was introduced in the petroleum tax system. This means that investments are immediately deducted for tax purposes, providing companies with more immediate tax benefits.
- **Loss handling:** Companies can carry forward their losses indefinitely, transfer them in the event of a sale or merger with another company, or request refunds when exiting the Norwegian Continental Shelf.

As a response to the Covid-19 pandemic, the Norwegian Parliament granted a massive relief package for the Norwegian oil and gas industry by implementing a temporary tax regime from 2020 to 2023. The regime incentivized operators to spend by offering direct expensing, and by boosting the investment uplift rate on all ongoing investments in 2020 and 2021, as well as on all development projects sanctioned before 2023 up until first oil is extracted.[188] The regime was calculated to lift the net present value (NPV) and lower the break-even prices of development projects.[189]

Even though this temporary system is now obsolete, the temporary changes introduced were very investment-friendly, and led to the previously-described boost in new development projects.

The temporary tax regime was actively aimed to encourage new investment in the oil and gas industry until the end of 2023, and was therefore grossly unaligned with our benchmarks.

The current system aims at 'neutrality', meaning that an investment that is profitable before taxation also should also be profitable after taxation. This system neither encourages nor discourages investment.

Benchmark 7: Adopt and implement just transition policies.

Norway has very little in the way of policy for a transition away from oil and gas, and we find that they have no plans for a just transition for oil & gas workers or communities. ***We find that Norway rates 'Grossly Unaligned'.***

Most policies and plans from the state rely heavily on the role of hydrogen production and large-scale CCS to reduce emissions (both in Norway and from the potential for transported carbon from other European countries).[190]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Even though Norway has very few transition policies in place, the country has foundational elements of worker inclusion that will be important for the transition. Norway has long-standing tripartite collaboration between employers, unions, and the government. Several arenas for tripartite collaboration have been established in the petroleum sector. The current government has also established the Council for a Just Transition, with representatives from unions and employers,[191] although the meetings have been held behind closed doors and have yet to produce tangible results. In addition, Norway in general and the Norwegian Continental Shelf have strong labour rights. These are elements that will prove to be highly valuable in a transition.

However, the Norwegian government has yet to develop and implement concrete plans for a just transition. Indeed, research shows oil workers are concerned about their employment rights and their ability to influence workplace policies in the transition, with a growing gap between conditions on offshore platforms and in the supply industry.[192] Unions in the petroleum sector have warned of a deterioration in offshore workers' rights and safety due to cost-cutting measures.[193]

Benchmark 8a: Regulate greenhouse gas emissions from the production process.
There is a plan to reduce upstream scope 1 and 2 greenhouse gas emissions intensity to 8kgCO_2e/boe or below by 2030; installations are subject to strict rules on greenhouse gas emissions, with strong verification measures and meaningful penalties; and flaring and venting of gas are prohibited. ***We find that Norway rates 'Fully Aligned'.***

Norway has strict greenhouse gas regulations for scopes 1 and 2 of its oil and gas activity, which has led to the emission per produced barrel being lower in Norway than in the other North Sea countries, and among the lowest globally. While the global average for scope 1 and 2 upstream emissions is around 54 kgCO_2e/boe,[194] Norway's 2022 scope 1 and 2 upstream emissions intensity is 8.15 kgCO_2e/boe, based on data on upstream emissions[195] and production[196] for 2022, as reported by the Norwegian Offshore Directorate. The Norwegian government's platform includes a goal for the oil and gas industry to reduce its scope 1 and 2 emissions by 50 percent by 2030, and to net zero by 2050.[197]

Norway is part of the EU Emissions Trading System (EU ETS). Reducing carbon emissions is one of the cornerstones of EU policy, and in accordance with this policy, companies are required to buy permits for their emissions. The petroleum sector often receives permits for free to prevent carbon leakage. Since 2005, the EU ETS has been part of bringing down EU emissions from power and industry plants by 37 percent.[198]

In addition to this, the regulations related to greenhouse gas emissions in Norway's petroleum activities are as follows:[199]

- **Carbon taxation:** The CO_2 Tax Act on Petroleum Activities mandates that companies involved in petroleum operations on the Norwegian Continental Shelf pay a tax on emitted CO_2. The Ministry of Finance oversees this tax, determining its rate and measurement methods. This tax is non-deductible from the production tax.
- **Ban on gas flaring:** The Petroleum Act prohibits natural gas flaring in petroleum activities on the Norwegian Continental Shelf, including during production pauses or maintenance. Companies can request permission to flare gas when safety reasons justify it, and the Ministry of Energy grants such permissions.
- **Emissions permits:** Permits must be issued for CO_2, methane (CH_4), nitrogen oxides (NO_x), sulphur oxides (SO_x), and non-methane volatile organic compounds (NMVOC).
- **NO_x Tax:** NO_x emissions are also regulated by a tax. However, most companies have signed an agreement that they will pay a fee per Kg of NO_x emitted in order to help finance the investments these companies have undertaken to reduce their NO_x emissions; this fee exempts them from the tax.

The Norwegian government has passed policies to more than double the CO_2 Tax on Petroleum Activities, to around NOK 2000 per ton of carbon in 2030.[200] Policymakers believe that this further reduces the scope 1 and 2 emissions on the Norwegian Continental Shelf.

Flaring and venting of gas has been prohibited since the 1970s, and is one of the main reasons why the production emissions per barrel in

Norway are lower than the European average. The early implementation of the national NO_x tax and carbon taxation have also proven very valuable in reducing emissions from the production of oil and gas. There is also a strict system in place for rules on greenhouse gas emissions, with strong verification measures and meaningful penalties.

Benchmark 8b: Protect ecologically valuable areas from oil and gas production.
There are no laws or regulations in place to permanently protect ecologically-valuable areas from oil and gas production, and only poorly-imposed restrictions on oil operations in sensitive areas.
We find that Norway rates 'Grossly Unaligned'.

The Norwegian law on preservation of nature only applies to coastal areas that are within 12 nautical miles from land.[201] Outside of this scope, where the vast majority of the Norwegian marine areas lie, there is no proper biodiversity protection. Of Norway's total sea areas, only 3.1 percent is protected as Marine Protected Areas (MPAs).[202]

There are some areas along the Norwegian coast that are protected from oil and gas exploration and production, but not through legally binding MPAs. Instead, these areas are protected from oil and gas activity by virtue of being unavailable for the oil and gas industry, and by being defined as closed for oil and gas activity in the Management Plans for Marine Areas. This applies to the Lofoten Islands, the coast off Finnmark in North Norway, Møreblokkene on the west coast, and Skagerrak (the strait between Denmark, Norway, and Sweden). Since there is no legal framework in place for MPAs outside of 12 nautical miles, use of Management Plans has been the main way to keep some areas off limits for the oil and gas industry.

One of the big disputes in Norway has been how far north the oil and gas industry should be allowed to go, and how to define the Marginal Ice Zone (the transitional zone between open sea and dense drift ice) in the far north of the Barents Sea. For decades, a guiding principle for the oil and gas industry has been that they are not allowed to operate within 50 kilometres of the marginal ice zone.[203] However, in 2019, arguments began over how the ice zone should be defined.[204]

Norway's leading oceans science institutions, like the Polar Institute[205] and the Institute for Marine Research,[206] recommended that the Marginal Ice Zone should be defined as an area where there is a 0.5 percent chance of finding sea ice in April. However, the majority in parliament decided that the marginal ice zone would be defined as an area where there is a 15 percent chance of finding sea ice in April[207]. This meant that a 96,000 kilometres area would not be defined as part of the marginal ice zone, despite the ocean science institutions' recommendations to the contrary; and would be open for oil and gas exploration and production.[208]

The Norwegian Environmental Agency has imposed stricter environmental regulations on exploration activities in the far north of the Barents Sea, due to sea bird populations and vulnerable ecosystems. However, Norwegian authorities have only once denied an application for exploration drilling to take place following the awarding of a licence: They rejected Equinor's application for exploration outside the Lofoten Islands in 2001, an area that later was closed for all oil and gas activity following sustained local and national opposition. The authorities have never denied a field development following an exploration period.

Benchmark 9: Plan for rapidly reducing oil and gas demand, in parallel with supply reductions.
There are plans to reduce emissions in Norway, and the country has a net zero-emissions target for 2050. But it lacks a credible process of reaching it, and further lacks targets for how to reduce oil and gas use by 2050. In addition, domestic emissions have only been reduced by 4.6 percent in the last 30 years. ***We find that Norway rates 'Unaligned'.***

In November 2022, Norway formally updated its Nationally Determined Contribution (NDC) to the Paris Agreement, committing to strengthening its 2030 target to a reduction of at least 55 percent below 1990 levels.[209] Based on this update, Norway's climate targets, policies, and finance were rated by Climate Action Tracker as 'Almost Sufficient'.[210] This analysis is also based on Norway's long-term goal.

The current Labour-led government has stated in their political platform that the 2050 goal is to achieve net zero.[211] For their NDC, Norway has reported a target of a 90 to 95 percent decrease in emissions by 2050 compared to 1990.[212]

Norway has good policies in place for emissions reductions in terms of zero emissions vehicles,[213] a ban on use of gas and oil for heating,[214] and the fact that the country is close to self-sufficient in terms of renewable energy for electricity.[215] However, there are no targets for how to reduce oil and gas use in Norway, nor are there any interim targets towards a full phase-out of all oil and gas use.

Even though Norway has a net-zero target of 2050, the country lacks a credible plan to achieve the target. In theory, Norway's emission targets look ambitious. However, Norway has currently reduced its emissions by only 4.6 percent since 1990.[216] In comparison, Sweden has reduced emissions by 37 percent in the same period,[217] while Denmark has reduced emissions by 41 percent,[218] with an EU-wide reduction of 32.5 percent.[219]

5. UK

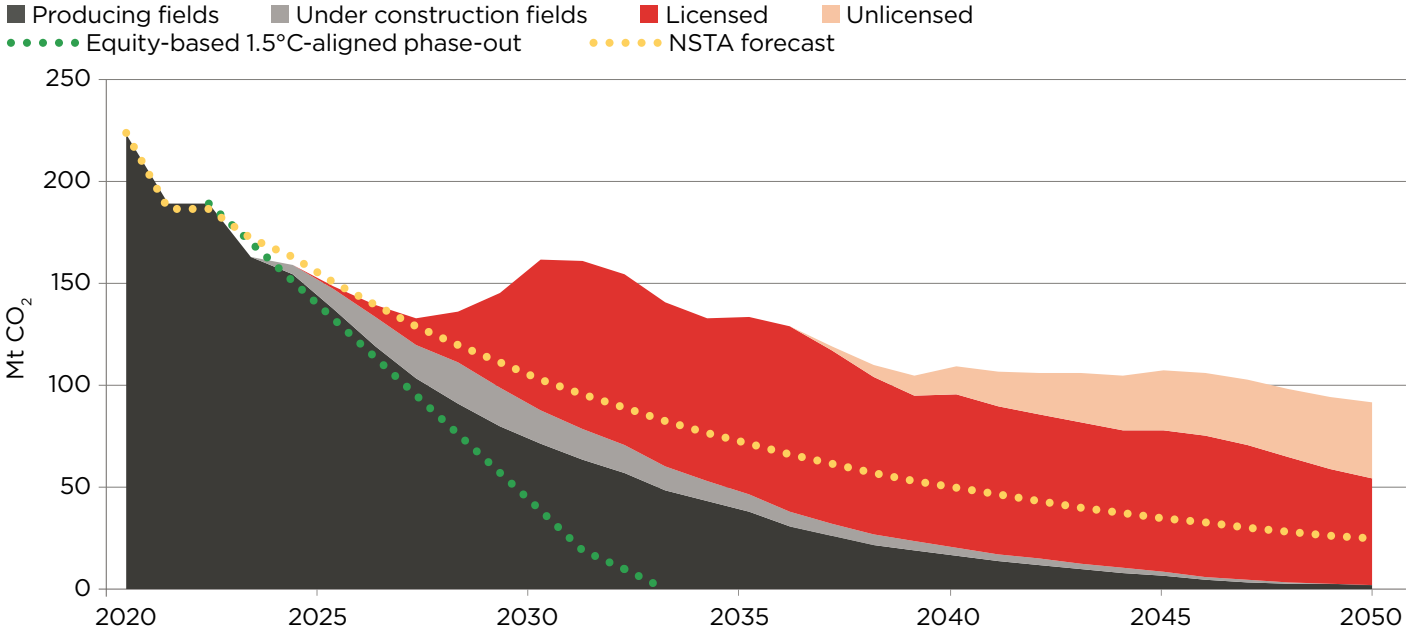
The UK is the region's second-largest producer, with oil making up around 60 percent of production, compared to around 40 percent from gas. Whilst the UK is still a significant producer, its oil and gas production has been in steady decline since 2000, mostly due to the maturity of the basin. The UK has had two decades to plan for phasing out its oil and gas industry in a just way that leaves nobody behind – but has thus far squandered this opportunity for leadership.

In 2019, our Sea Change report found that the oil and gas in developed offshore fields in the UK was already more than the UK could fairly extract under the Paris Agreement.[220] Despite the UK government declaring a climate emergency in May 2019, its leaders continued to approve new oil and gas fields for development.[221] As of 2023, the UK threatened to be one of the world's top 20 developers of new oil and gas fields through 2050, alongside Norway.[222] Approval of new fields and licensing could almost triple the cumulative global carbon pollution caused by remaining UK oil and gas production between now and the end of the century (Table 2). By contrast, keeping the UK's undeveloped oil and gas in the ground would help prevent 3.7 Gt of carbon pollution (Table 2), which is equivalent to the annual emissions of over 9,300 gas power plants.[223]

Stopping approval of new fields or licences is an essential step towards aligning UK production with an equity-based 1.5°C phase-out pathway. This is shown in Figure 10. Phasing out UK production by the early 2030s would require further policies to accelerate the decline of production from existing fields. If new field development and licensing continues, the carbon pollution from the UK's oil and gas production could even *increase* between the late 2020s and early 2030s, and could fall by less than 20 percent between 2023 and 2035. This would be the case even if new licensing ceased immediately, because new licences are not expected to result in new production until after 2035. Thus, ending new field development is critical for beginning to align the UK's production with a 1.5°C trajectory during this decade.

The UK North Sea Transition Authority's (NSTA) own forecasts project a faster decline in UK production.[224] However, this is based on the NSTA's assumption of a flat decline rate from 2026 onwards, drawn from production trends in existing fields and survey data, rather than from detailed modelling of the potential impact of new field development and exploration.[225] Notably, Rystad's more detailed modelling is based on its estimate that the UK has 13.9 billion barrels of remaining commercially extractable oil and gas resources (under a business-as-usual scenario). The NSTA estimates up to 24.7 billion barrels of remaining UK resources.[226,l] The only way to ensure a fast and fair phase-out of UK production is through government policy.

Figure 10: Projected annual CO_2 pollution from UK oil and gas production, by current stage of development



Source: Oil Change International analysis of data from the Rystad Energy UCube (January 2024), Civil Society Equity Review,[227] North Sea Transition Authority[228]

l Rystad estimates the UK has 3.6 billion BOE of developed reserves, 3.5 billion BOE of discovered resources, and 6.7 billion BOE of undiscovered resources. The NSTA estimates 3.5 billion BOE of "sanctioned" reserves (similar to developed), 6.5 billion BOE of 'unsanctioned' resources, and 14.7 billion BOE of prospective (undiscovered) resources.

Benchmark 1: Align policy framework with the Paris goals and COP28 decision on transition away from fossil fuels.
Alignment of production with the Paris goals and a 1.5°C warming limit is implied to be relevant by the government to its oil and gas production policy, but their policies, legislation, and behaviour prioritise maximising extraction, making their production alignment meaningless in practice. ***We find that the UK rates as 'Unaligned'.***

The primary institution overseeing policy for the UK Continental Shelf is the North Sea Transition Authority (NSTA). The NSTA was created through the Energy Act 2015 and is owned by the government Department for Energy Security and Net Zero, with its remit as the regulator for the North Sea.[229] The NSTA operates as an independent body, and its strategy, presented to Parliament in 2020 and effective from February 2021,[230] is guided by two core obligations:

1. Ensure the maximum amount of economically-recoverable petroleum is extracted from the UK waters, often referred to as Maximum Economic Recovery (MER). This is the primary obligation and is legally binding within legislation.

2. Take appropriate measures to help the Secretary of State meet the net-zero emissions target, including reducing greenhouse gas emissions from activities like flaring and venting, supporting carbon capture and storage projects, and addressing power generation. This obligation is not in legislation, and therefore is secondary to MER.

In September 2023, the UK Prime Minister, Rishi Sunak, insisted that the UK would 'take every last drop' of oil from the North Sea.[231] The UK does not have any limits on the amount of oil and gas that can be produced. In fact, the principle of MER requires the opposite once a licence has been granted. Recently, the government reversed a number of initiatives designed to assist the UK in meeting its net-zero goals by the 2050 target. The Prime Minister stated that he remained committed to meeting 'our international agreements including the critical promises in Paris and Glasgow to limit global warming to 1.5 °C,[232] although the government's own Climate Change Committee found that the British government's backtracking on its climate policies has made it even more difficult for the UK to reach its climate targets.[233]

The Climate Change Act (2008)[234] together with the North Sea Transition Deal, a 2021 agreement between the government and the offshore oil and gas industry, is supposed to align production emissions with Paris goals. But neither consider the need to align the UK's oil and gas production, and the global emissions caused by burning it, with the 1.5°C warming limit.

The Climate Change Act requires the government to set legally-binding carbon budgets, which act as a cap on emissions for a five-year period, as stepping stones towards the 2050 goal.[235] The sixth carbon budget, set in 2021, legally enshrined the target of reducing UK emissions by 78 percent by 2035.[236] Despite this, the Climate Change Commission's June 2023 report to Parliament stated that the UK is currently off-track both for its nationally-determined contribution under the Paris Agreement in 2030, and for its legally-binding sixth carbon budget.[237]

Benchmark 2: End new licensing.
Licensing is allowed, but is subject to a limited or partial process to assess consistency with Paris goals. However, this assessment process considers only production emissions, and does not include scope 3 emissions. The UK government is seeking to legislate mandatory licensing rounds and to weaken the climate checkpoint that assesses whether licensing rounds can go ahead. ***We find that the UK rates as 'Unaligned', with the potential to become 'Grossly Unaligned'.***

Legislation has empowered the NSTA to award licences for exploration and production in the North Sea, and the agency is authorised to open a licensing round whenever it sees fit.[238]

Licences are mainly awarded in rounds. The most recent round (the 33rd licensing round) was launched on 7 October 2022, with 931 blocks and part-blocks made available. In total, there were 115 applications for 258 blocks (the highest number since the 29th round in 2016/17).[239]

The 33rd licensing round was the first to incorporate a 'climate compatibility checkpoint', which consists of three tests relating to:

1. Reduction in operational greenhouse gas emissions from the sector compared to the emission reductions commitments set out in the North Sea Transition Deal from 2021;

2. Operational greenhouse gas emissions intensity from the oil and gas sector, benchmarked internationally; and

3. The status of the UK as a net importer of oil and gas.

Climate groups and academics submitted strong arguments during consultation for a test relating to scope 3 emissions, as these emissions represent the majority of carbon emissions from oil and gas; but this scope 3 test was not included in the final checkpoint.[240]

Despite clear evidence that any further oil and gas production is incompatible with 1.5°C, and the climate compatibility test, the first 27 licences were issued on 30 October 2023.[241] In January 2024, 24 more licences were issued, with the NSTA saying that more would be issued following environmental checks.[242] More will likely be issued following further assessment, and the government aims to issue more than 100 before the end of its current parliamentary term (January 2025 at the latest).[243] It is clear, therefore, that the test is not sufficient to assess consistency with 1.5°C.

The UK is politically very divided on oil and gas licences. The Labour party, the second-largest party in Parliament at the time of writing,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has committed to awarding no new licences if it is in government. Conversely, in January 2024, the current government introduced legislation to ensure mandatory annual licensing rounds, and to weaken the climate checkpoint to consider only carbon intensity compared to the most-polluting liquefied natural gas, and the UK's status as a net importer. If this legislation passes, which it is likely to, then the UK will move to 'Grossly Unaligned' status.

Benchmark 3: Stop approving new development.

The UK is allowing new development, but it is subject to a limited process to assess consistency with climate goals, and some development has been blocked on climate grounds. However, the tests themselves are insufficient, and only take into account a small fraction of the projects' potential emissions, resulting in a number of projects being granted development consent in the last few years. ***We find that the UK rates as 'Unaligned'.***

Development consent does not need to pass the same checks as licensing; rather, climate impact is assessed in a two-step test:

1. Environmental assessment by the Secretary of State

2. 'Effective net-zero test' by the NSTA

According to the NSTA, the net-zero test 'may include an economic assessment with societal [greenhouse gas] costs; consideration of lifetime production against UK future demand; production emissions impact on the North Sea Transition Deal emissions reductions targets; fit with NSTA guidance and expectations; and where applicable also a range of other factors such as infrastructure reuse, carbon storage impact and any particular UKCS spatial synergies or overlaps'.[244] Notably, as with licensing and overall UK policy framework, there is no assessment of scope 3 emissions or of UK contribution to global emissions, and there is no transparency in the implementation of the second step.

Development consent has occasionally been denied as a result of this test. Most recently, the Jackdaw gas field was denied development consent in 2021 due to concerns that the project would 'have a significant effect on the environment, resulting from atmospheric emissions, that cannot be avoided, prevented, reduced or offset by attaching conditions to the agreement to the grant of consent'.[245] However, in 2022, following Shell revising their plan, the project was approved, despite the potential 16.08 million tonnes of emissions from burning the extracted fuels.[246]

In September 2023, the NSTA granted development consent for the Rosebank Project, which is estimated to contain nearly 500 million barrels of oil and gas.[247] Burning this would cause 200 million tonnes of CO_2 to be released into the atmosphere.[248]

No political party in the UK has committed to ending development consent.

Benchmark 4: Establish and implement a Paris-aligned date to end oil and gas production.
The UK does not have a date for an end to oil and gas production, nor is it planning on setting one. ***We find that the UK rates as 'Grossly Unaligned'.***

The report from the Civil Society Equity Review states that under an equitable phase-out, the UK should phase out fossil fuel production by 2031.[249]

The current government has recently moved to pass legislation that would ensure annual licensing rounds with a less-robust climate checkpoint. This legislation, if passed, would make the UK more likely to increase exploration over the coming years.[250] The opposition Labour party, while ruling out further licensing for oil and gas, have not committed to an end-date for production or extraction, and plan for oil and gas to be in the energy mix for the foreseeable future.

Moreover, the government's 2023 Powering Up Britain strategy relies heavily on the use of CCS to bring down emissions, aiming to make the UK a world leader in the field.[251] In November 2023, the Institute for Energy Economics and Financial Analysis (IEEFA) warned that 78 percent of proposed carbon capture in 2030 would come from projects owned by oil and gas companies, including BP; and would prolong fossil fuels rather than contributing towards phasing them out.[252]

As part of the NSTD, the UK government aims to capture 20 to 30 million tonnes of CO_2 per year by 2030, and 50 million tonnes per year by 2035. The UK government sees this as critical to achieving net-zero. The NSTA awarded 20 carbon storage licences in the first round of carbon storage licensing in 2022. There is currently no commercial use of CCS in the UK, though it has been proposed as part of a new gas-fired power plant in Peterhead, Scotland.[253]

Benchmark 5a: Provide a fair share of climate finance and other support to Global South countries, including to phase out production.
The UK has made some commitments to climate finance, but is off-track in actually providing this finance. The pledges it has made come nowhere close to meeting a fair share of support, and it has failed to pledge any financial or other specific support to enabling phase-out of production by Global South countries. ***We find that the UK rates as 'Grossly Unaligned'.***

At COP26, in 2021, the UK committed to spending GBP 11.6 billion in International Climate Finance from 2021 to 2026.[254] It was reported in July 2023 that the government was significantly off-target to reach their climate finance commitments,[255] and was projected to spend GBP 1.1 billion below internally agreed targets from 2022 to 2024.

The government has laid out plans to meet their climate finance goal, and has projected that it will hit the target of total climate finance between GBP 11 billion and GBP 12 billion between 2025 and 2026. This estimate is based on a revised definition of their spending, including GBP 3 billion to be invested in climate change solutions that protect, restore, and sustainably manage nature; and aiming to triple adaptation finance to GBP 1.5 billion by 2025. Officials assert that it brings the way the UK counts climate finance into line with other countries; however the UK has been accused of 'double counting' and 'moving the goalposts'.[256]

Analysis by the Overseas Development Institute (ODI) found that the UK has not committed its fair share towards the annual USD 100 billion of climate finance that Global North countries committed to mobilise by 2020; its share is based on the UK's historical responsibility for cumulative climate pollution, as well as gross national income and population size.[257]

The UK's commitments are far too weak compared to the scale of the global need. To meet its fair share towards a conservative estimate of the USD 1 trillion in international finance for mitigation, adaptation, and loss and damage required annually by 2030, the UK would need to provide finance on an order of USD 59 billion annually by 2030, if using ODI's approach to allocating fair shares between rich countries.[m] As noted in Section 3, this is meant to be indicative of the scale of additional effort required, not a definitive estimate of the UK's obligations.

The UK has no climate finance earmarked for supporting the phase-out of fossil fuel production in the Global South, though it has stopped providing international finance for fossil fuels (see Benchmark 5b). The recent Civil Society Equity Review report on the equitable phase-out of extraction suggests that the UK's minimum financial obligation for financing a global phase-out is USD 8 billion per year.[258]

Taken together, minimum estimates of the UK's fair share of finance towards mitigation, adaptation, loss and damage, and extraction phase-out are around USD 67 billion (GBP 52 billion[259]) annually by 2030 – 4.5 times the size of the UK's commitment of GBP 11.6 billion by 2026.

Benchmark 5b: Work with other governments towards a global oil and gas phase-out.
The UK is not a member of BOGA in any capacity, nor has it endorsed the call for a Fossil Fuel Non-Proliferation Treaty. However, it is a founding member of the CETP and is currently on track for their pledge. ***We find that the UK rates as 'Unaligned'.***

In 2021, at COP26, the UK launched the Clean Energy Transition Partnership following its commitment to end international public finance for fossil fuels. They are one of eight signatories to be aligned with the pledge.[260]

m Based on the UK's historical responsibility for cumulative climate pollution, gross national income, and population size, ODI finds the UK's fair share towards Global North countries' existing USD 100 billion commitment to be 5.88 percent We apply this same fair share allocation to USD 1 trillion as indicative of the scale-up in support required.

The UK helped secure a G7 agreement in May 2023 to 'accelerate the phase-out of unabated fossil fuels'.[261] However, in November 2023, ahead of COP28, the UK's Energy and Climate Minister told members of parliament that he 'was not fixated' on whether countries committed to phase down or phase out, shifting the UK away from the EU's tougher language on phasing out fossil fuels.[262] The UK also declined to sign on to a letter from 'high ambition countries', including France, Spain and Denmark, backing a fossil fuel phase-out.[263]

The UK often seeks to portray itself as an international climate leader,[264] despite the evidence showing they are reluctant to commit to a phase-out of fossil fuels.

Benchmark 6: Design fiscal terms to align investment behaviour with production decline goals.
The UK tax regime actively aims to encourage investment in fossil fuels and the UK has historically had one of the most industry-friendly taxation systems for oil and gas in the world. Despite administering new measures to tax excess profit, it has used the system to increase incentives to invest in North Sea oil and gas. ***We find that the UK rates as 'Grossly Unaligned'.***

Prior to the introduction of the Energy Profits Levy (often referred to as the windfall tax), the UK had one of the most industry-friendly taxation systems for oil and gas in the world, and will revert to this system once the windfall tax is ended, which will be 2028 at the latest.

The UK tax system is made up of:

- **Corporation Tax:** General corporate tax rate in the UK is 25 percent, while ring-fenced profits from oil and gas production are taxed at 35 percent in 2023 (up from 30 percent prior to 2023).
- **Supplementary Charge:** The level of supplementary charge changes often to reflect the oil and gas economy at any given time. It is currently set at 10 percent, having been reduced from 20 percent in April 2022.
- **Capital Allowances:** Until 2023, ring-fenced profits from petroleum had a 100 percent capital allowance for most capital expenditure; however this has now been reduced to 29 percent.
- **Energy Profits Levy (EPL):** Also referred to as a windfall tax, this was introduced in 2022 in response to the huge rise in energy prices in May 2022, as an additional tax on profits. It was initially set at 25 percent (total tax rate of 65 percent), but has increased to 35 percent (total tax rate of 75 percent) as of January 2023. It is set to remain until 2028, though the government has stated that if oil and gas prices fall below a certain level for six months then it will be ended. However, this levy also contains within it a significant subsidy, outlined below.

Due to the number of oil and gas loopholes and subsidies in the UK tax system, companies often end up paying negative tax. For example, in the tax years 2015 to 2016 and 2016 to 2017, the treasury gave more money to oil companies than it took from them in taxes.[265] In 2021, climate activists took the UK Government to court over their support for oil and gas via subsidies.[266] These subsidies include:

- **Capital Relief under the EPL scheme:** Rather than discouraging investment, the EPL contains a huge super-deduction for investment in the North Sea. According to the Institute for Fiscal Studies, this 'means that investing GBP 100 in the North Sea will cost companies only GBP 8.75, with the remaining cost paid by the government. So a massively loss-making investment could still be profitable after tax'.[267]
- **Field Allowance:** This reduces the amount of profits subject to the Supplementary Charge, in exchange for operating in costlier and more difficult fields as the North Sea basin declines.
- **Decommissioning subsidies:** These take the form of Decommissioning Tax Reliefs, Decommissioning Relief Deeds, and Transferable Tax History. Taken together, these subsidies mean that the taxpayer pays almost half of any decommissioning costs and locks the government into continuing the tax relief or paying huge sums to companies in compensation.

Many of the subsidies available for oil and gas are not afforded to renewables, meaning there are high incentives for companies to produce fossil fuels. In addition to this, despite warnings from the renewable energy sector, no offshore wind projects submitted bids during the latest Contract for Difference round in September 2023. This should be understood as a result of government failure to set a strike price that was reasonable given inflation levels.[268]

Benchmark 7: Adopt and implement just transition policies.
The UK has some policies aiming towards a just transition, but the main vehicle for transition does not provide any significant support for workers and communities, and where work has begun it has been delayed and unambitious. In addition, there are laws that aim to put significant restrictions on union activity. ***We find the UK rates as 'Unaligned'.***

Due to devolution in the UK, some aspects of a just transition should be held separately in Scotland by the Scottish government, while other aspects remain reserved for Westminster (that is, the central UK government). As a result of this, a UK-wide analysis yields a significantly different assessment of alignment with a just transition than an analysis of the separate countries that make up the UK. To take this into account, this section reviews UK-wide and Scotland policy separately.

Scotland
While part of the UK, Scotland has its own devolved Parliament. Through devolution, Scotland has the power to make its own laws around some issues, while other issues remain reserved for decision-making in Westminster. Energy policy is a devolved issue,

as are skills, education, and onshore licensing; offshore licensing remains reserved. Scotland is therefore able to enact its own policies for just transition, though it does not have the power to make a decision on phase-out.

Scotland has legally enshrined just transition principles through the 2019 Climate Change Act.[269] This means it must reduce greenhouse gas emissions in ways that:

- Support environmentally- and socially-sustainable jobs;
- Support low-carbon investment and infrastructure;
- Develop and maintain social consensus through engagement with workers, trade unions, communities, non-governmental organisations, representatives of the interests of business and industry, and other such persons such as the Scottish Ministers consider appropriate;
- Create decent, fair, and high-value work in a way which does not negatively affect the current workforce and overall economy; and
- Contribute to resource-efficient and sustainable economic approaches which help address inequality and poverty.

In 2019, the Scottish Government set up the Just Transition Commission, a non-statutory public body 'with a remit to provide practical and affordable recommendations to Scottish Ministers'.[270] This came after years of campaigning by the labour and environment movements, including the establishment of the Just Transition Partnership in 2016.[271] At present, there are only three trade union seats out of 17.[272]

Part of the Scottish government's response to the first commission was to establish the National Just Transition Planning Framework, which sets out key principles to which all subsequent just transition plans by the Scottish Government should adhere. The Commission's *Annual Report* for 2023 called for a drastic change to the Scottish government's current approach to just transition, highlighting that the 'significant' action needed to put Scotland on track, as the current path 'will not deliver a just transition'.[273]

The release of a draft of the Energy Strategy and Just Transition Plan by the Scottish government, which opened for consultation in March 2023, represents the most tangible progress thus far towards plans for a just transition. Environmental organisations and trade unions alike heavily criticised the plans, primarily because they lacked detail on exactly how transition will be implemented: the plans fail to state what will happen, when it will happen, or how it will happen. Overall, environmentalists, trade unionists, and others have questioned whether it really represents a plan at all. The final version of the plan is expected sometime in summer 2024.

As such, Scotland will need to take many more actions toward the necessary planning for, investment in, and delivery of a just transition. However, it has made significantly more progress than the UK as a whole, and would achieve a rating of 'Partially Aligned' if it were considered on its own.

UK

The North Sea Transition Deal (NTSD) is the main vehicle for the UK's transition. This deal covers emissions reduction targets covered in Benchmark 8a, and it also:

- Aims to support up to 40,000 direct and indirect supply chain jobs in decarbonising oil and gas production, CCUS, and hydrogen sectors; and
- Includes a voluntary commitment from the oil and gas sector to achieve 50 percent UK content for all new energy transition projects and in oil and gas decommissioning.

The deal has also been criticised by green groups for a lack of support for workers and communities and is largely seen as a handout to prop up a declining oil and gas industry. While it has some positive language about people and skills, the critique is that it is failing to provide any tangible investment or policy support for workers or communities.

For workers, an integral part of the NSTD was the Integrated People and Skills Strategy, developed in 2022 by Offshore Petroleum Industry Training Organisation (OPITO), the offshore oil and gas training standards body. As part of the strategy, OPITO set up a working group to create an Offshore Training Passport, designed to facilitate cross-sector recognition of transferable skills between offshore renewables and fossil fuels. Following a survey of offshore workers that showed high levels of insecurity, job dissatisfaction, and prohibitive training costs,[274] the passport element of the strategy was a key priority for unions, offshore workers, and climate groups. Despite promises from a number of training standards bodies, the process has been significantly delayed, with no sign of a passport despite initial plans to complete this process by summer 2023. In February 2022, the UK Parliament voted down amendments to a bill that would have funded retraining for oil and gas workers.

Offshore oil and gas workers have produced a set of 10 demands for a just transition away from oil and gas. These demands contain recommendations for the involvement of fossil fuel workers in decision-making; pathways out of high-carbon jobs; port development and UK supply chain rules; improved whistleblowing and union rights; and policies to ensure that communities reliant on North Sea oil and gas jobs are not left behind. At the time of writing, there has been no progress towards the majority of these policy suggestions.[275] As it stands, the UK has a number of laws that restrict union activity beyond that of other countries in Europe.[276] Reports from offshore workers suggest that conditions in offshore wind are often worse than those in oil and gas. This is due to a lack of regulation – an issue that the UK government has yet to address.

Benchmark 8a: Regulate greenhouse gas emissions from the production process.
There are policies in place to regulate and reduce greenhouse gas from the oil and gas sector by 50 percent by 2030, and a goal to end flaring and venting by 2030. ***We find the UK rates as 'Partially Aligned'.***

In addition to containing provisions for jobs and skills, the NSTD lays out reduction requirements for scope 1 and 2 emissions from oil and gas production and investment levels for abatement technologies.

The NSTD:[277]

- Establishes emissions reductions of 10 percent by 2025, 25 percent by 2027 and 50 percent by 2030 (each relative to a 2018 baseline); and
- Commits to investing GBP 14 to 16 billion in new energy technologies by 2030, with the government taking responsibility for delivering a business model for CCUS and hydrogen.

The deal has been criticised by the Climate Change Committee, as a target of 50 percent reduction by 2030 falls short of the 68 percent reduction that the committee has deemed to be feasible, and that would align with the IEA's ambition level. The UK is currently on track to meet the NSTD's weak emissions reduction goals, having cut upstream greenhouse gas emissions by 23 percent between 2018 and 2022.[278] The UK's scope 1 and 2 upstream emissions intensity was reported as 22.8 $kgCO_2e/boe$[279] in 2022, and, as such, is far off from the IEA's identified best-practice goal of 8 $kgCO_2e/boe$ by 2030.

CO_2 emissions from oil and gas installations peaked in 2001 and fell by 41 percent in the period from 2001 to 2020.[280] The NSTA has introduced a range of policies aimed at reducing emissions from the oil and gas sector to support the government's commitment to net-zero emissions by 2050. These include:

- **Energy Integration and platform electrification:** Platform electrification is seen as essential for reduced emissions. The use of offshore wind to supply energy to platforms has been highlighted as a possible commercial opportunity for renewable power. The NSTA also expects that licensees will undertake technical and economic assessment of low-carbon solutions, and that they will either participate in regional low-carbon power schemes or invest in their own.[281]
- **Flaring and venting:**[282] The NSTA guidance to licensees states that flaring and venting should be at the lowest possible level, that there should be zero routine flaring and venting by 2030, and that all new developments should be planned on the basis of zero routine flaring and venting.

As a result of Brexit, the UK left the EU Emissions Trading Scheme (ETS) and replaced it with the UK ETS. The UK ETS operates in a similar way to the EU ETS, though upon its inauguration in 2021, it was more ambitious and set a cap five percent lower than that of the EU ETS.[283]

Unlike Norway, the UK does not have an additional carbon tax scheme which could act as an incentive to further reduce emissions.

Benchmark 8b: Protect ecologically valuable areas from oil and gas production.
There are no laws or regulations in place to permanently protect ecologically-valuable areas from oil and gas production, and there are only poorly-imposed restrictions on oil operations in sensitive areas. ***We find the UK rates as 'Grossly Unaligned'.***

Marine Protected Areas (MPAs) are managed by the relevant authorities in each of the North Sea countries. In Britain, that body of authorities comprises Natural England, NatureScot, Natural Resources Wales and, in places beyond 12 nautical miles off the coast, Joint Nature Conservation Committee. Each of these bodies provides conservation advice for up to 12 nautical miles off the coast.[284] In England and Scotland, 37 percent of offshore water in each country is designated as a Marine Protected Area.[285,286]

There is not a ban on development in MPAs, but developers do have to provide extra detail on the environmental impact of their projects.[287] All developers have to complete a screening on habitat conservation. Licences are screened, and those that threaten Special Protection Areas and Special Areas of Conservation go through a Habitat Regulations Appropriate Assessment, which includes a public consultation.[288] Those projects that affect MPAs and Marine Conservation Zones go through a separate assessment, which does not include a public consultation.

Seismic surveys and exploratory drilling can take place with a licence and do not require a further Environmental Impact Assessment (EIA). EIAs are only necessary when an oil field requires development consent or approval. An EIA is completed regardless of whether the site is in an MPA, and has been described as a route exercise where ecological and environmental impacts are repeatedly minimised and dismissed.[289]

The UK has 509 fossil fuel sites in protected areas – more than any other country in the world.[290,291] Environmental groups Oceana and Uplift have raised concerns about the UK's ability to meet its goal to protect at least 30 percent of habitats by 2030, if indeed further development is allowed in MPAs.[292]

The 33rd licensing round opened up 96 blocks within MPAs. Oil and gas development in the North Sea is a major source of pollution in the form of the release of chemicals and microplastics, noise pollution, chronic oil pollution (routine small amounts of oil in wastewater released to the sea), and the potential for oil spills.[293]

The Rosebank Project's pipeline will cut through the protected Faroe-Shetland Sponge Belt.[294] This is likely to cause significant damage, as shown in the Laggan Field, where drilling in the middle of an MPA has led to the complete loss of some sponge habitats.[295]

Benchmark 9: Plan for rapidly reducing oil and gas demand, in parallel with supply reductions.
The UK has plans to reduce emissions. The country has a target of net zero-emissions by 2050, but lacks a credible process of reaching it, and lacks targets for how to reduce oil and gas use by 2050. In addition, the UK government has reversed several commitments essential to reaching its climate goals. ***We find that the UK rates as 'Unaligned'.***

The UK was one of the first countries to sign a commitment to reduce emissions to net-zero by 2050 into law. This does not reflect the need for Global North countries to achieve net-zero *before* 2050 in line with equity, but the UK has led the way in building long-term emissions reduction into its long-term planning. They have done this through the creation of a Climate Change Committee that sets legally-binding targets, reviews whether the country is on course, and proposes corrective action.

However, in 2023, the government reversed several of the commitments within the net-zero strategy that would have reduced demand for oil and gas. Among the changes they made were:

- Pushing back the ban on the sale of new petrol and diesel cars from 2030 to 2035;
- Weakening the target to fully phase out gas boilers by 2035 to an 80 percent reduction;
- Failing to introduce new energy efficiency regulations in homes (previously, ministers had considered fails for landlords who did not upgrade to minimum levels of energy efficiency);;
- Delaying until 2035 the target to ban all off-grid boilers (previous target was 2026), and reducing it to 80 percent from 100.[296]

These changes to policy were criticised not only by climate experts, but also businesses who had been working toward the previous targets.[297] Additionally, as addressed earlier in this report, the UK is off-track for its Sixth Carbon Budget, and various environmental groups are taking the government to court over 'inadequate' strategy for reducing carbon emissions.[298]

6. THE NETHERLANDS

More than 470 gas fields have been discovered in the Netherlands, some 250 of which are currently producing, making the Netherlands the region's third-biggest producer.[299] Almost all production in the Netherlands is of fossil gas, and most of this is happening onshore. The Groningen gas field is by far the largest; all the other fields are therefore called 'small fields'. With regards to oil, of the total of 50 oil fields discovered, some 15 are currently producing.

Production is already in a steep, policy-driven decline, though this is in response to safety hazards caused by the Groningen gas field, rather than due to climate policy. Production fell by more than 70 percent in the past five years (from 2018 to 2023). The Groningen gas field still produces some gas,[300] even though it was decided by the Dutch government to permanently close the production starting from 1 October 2023.[301]

While Dutch production is in decline, the government has no plan in place to ensure it is phased out in a fast and fair manner. As Figure 11 shows, approval of new fields and licences threatens to reverse this decline in the 2030s. Carbon pollution from Dutch production could nearly double between 2030 and 2045 if new fields and exploration are allowed. This would be well past the date when Dutch production should be completely phased out under an equity-driven policy.

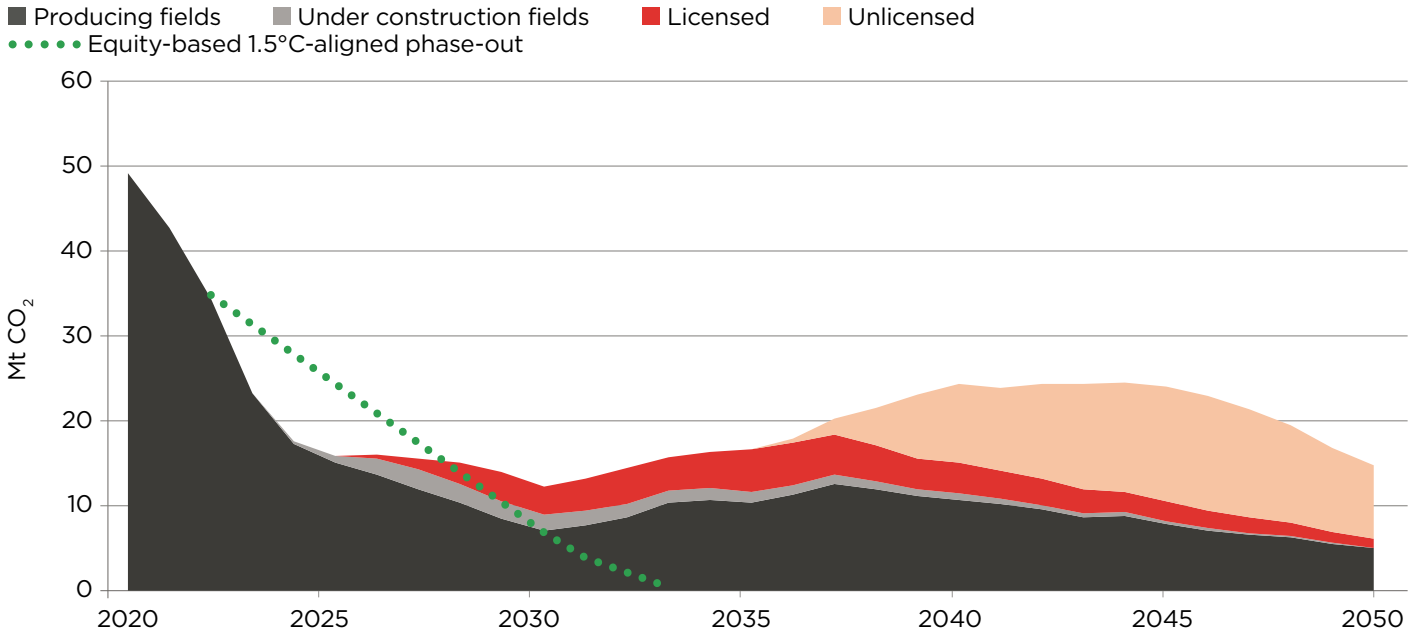
Benchmark 1: Align policy framework with the Paris goals and COP28 decision on transition away from fossil fuels. *Alignment of production with the Paris goals and a 1.5°C warming limit is implied to be relevant by the government to its oil and gas production policy, but their details are not specified on how this is to be applied, making it meaningless in practice.* ***We find that the Netherlands rates as 'Unaligned'.***

The Dutch North Sea Agreement from 2020 is an agreement between the government, stakeholders, and civil society that is in place until 2030. The agreement states that Dutch energy and climate policy, including natural gas use and extraction, must at all times be in line with the goals of the Paris Agreement. It clarifies that this means 'a maximum global warming well below 2 degrees and an aim to ensure that the maximum warming does not exceed 1.5 degrees, or limits set by updates of the IPCC with regard to these goals and its translation for the Netherlands.'[303]

In theory, this agreement should mean that all policy frameworks for the Netherlands are aligned with the Paris goals, and thus ensure a transition away from fossil fuels. However, the Dutch government is claiming that since production will remain below national consumption, continued production is aligned with the Paris goals.

Benchmark 2: End new licensing. *There are active programmes of ongoing licensing that do not include consideration of Paris-consistency; and there are no plans to limit licensing rounds, either temporarily or permanently.* ***We find that the Netherlands rates as 'Grossly Unaligned'.***

Figure 11: Projected annual CO_2 pollution from Dutch oil and gas production, by current stage of development



Source: Oil Change International analysis of data from Rystad Energy UCube (January 2024), Civil Society Equity Review[302]

Agnes Monkelbaan, Wikimedia (CC BY-SA 4.0 DEED)

In January 2023, the Dutch government announced that exploration would be limited to offshore gas fields under the North Sea, and put a halt to all new plans for onshore gas exploration.[304] This was not done for climate reasons, but because of the potential for earthquakes and the growing opposition to onshore gas development.

There are no fixed licensing rounds offshore in the Netherlands; instead companies can apply for them at any time, and they are issued by the Ministry of Economic Affairs and Climate policy. The Ministry of Economic Affairs must approve a production plan before the start of production. There is no policy in place in the Netherlands to restrict offshore drilling, and the Dutch Government has announced they are looking to expand gas extraction in the North Sea, thus also being positive to new licensing.[305]

Benchmark 3: Stop approving new development.
There are no restrictions on new field or project development. ***We find that the Netherlands rates as 'Grossly Unaligned'.***

Instead of limiting new development consent, the Dutch government has again done the opposite. Since Russia's invasion of Ukraine, the policy of extracting gas from small fields in the Netherlands has been accelerated. In 2022, the Dutch government announced that the Ministry of Economic Affairs and Climate would be 'accelerating its permit procedures for current and new permits [in the North Sea] as much as possible', and that more gas extraction in the North Sea was part of the broader government policy.[306]

The Ministry of Economic Affairs and Climate Policy anticipated that one billion cubic metres (m^3) of extra gas could be produced per year in the short term (one to three years), and that it could provide additional production of two to four billion m^3 per year in the longer term (over five years).[307]

In June 2022 the Netherlands and Germany announced a joint venture to produce gas in the North Sea.[308] The first gas from this venture is expected to be produced at the end of 2024. This is but one of many examples of how the Dutch government is continuing to grant new development consents, despite clear scientific warnings that there is no room for new oil and gas investment if the world is to meet the Paris goals.

Benchmark 4: Establish and implement a Paris-aligned date to end oil and gas production.
Dutch policy has stated an end-date of 2045, but with no equitable differentiation. ***We find that the Netherlands rates as 'Partially Aligned'.***

In June 2022, the State Secretary for Economic Affairs and Climate wrote a letter to the House of Representatives in the Netherlands stating that he does not issue new oil and gas permits that allow exploration beyond 2050. He also stated that he was investigating whether the Dutch government could further shorten the duration of new permits and approvals for extraction plans, to account for the fact that the Netherlands would be reducing gas extraction in the North Sea in the near future.[309] On 16 June 2023, a year after this letter, the House of Representatives moved the end-date five years earlier, to 2045. Per the State Secretary, the

government would begin imposing the 2045 end-date for the 23 existing licences without any end-date.[310]

However, there is a major loophole in the 2045 end-date: In the same announcement, the State Secretary of Economic Affairs and Climate wrote that if there would still be a domestic demand for gas after 2045, they could continue to produce gas in the Netherlands.[311]

The Dutch Government's closure of the Groningen field is not happening due to climate concerns, but because of thousands of earthquakes in the northern region of Groningen which left villages and houses in shambles.[312] It is estimated that gas extraction caused over 1,000 earthquakes between 1963 and 2013.[313] The producer of the Groningen gas field is NAM – a joint venture between Exxon Mobil and Shell.

Benchmark 5a: Provide a fair share of climate finance and other support to Global South countries, including to phase out production.

International finance commitments come nowhere close to meeting a fair share of support, and include no financial or other support specific to enabling the phase-out of production by Global South countries. ***We find that the Netherlands rates as 'Grossly Unaligned'.***

According to the Dutch climate strategy, the Netherlands' total climate finance is expected to reach EUR 1.8 billion (approximately USD 2 billion[314]) by 2025. This includes both public and private funding, for both mitigation and adaptation.[315]

Analysis by the Overseas Development Institute (ODI) ranks the Netherlands as having contributed its fair share – based on the Netherland's historical responsibility for cumulative climate pollution, gross national income, and population size[316] – towards the annual USD 100 billion of climate finance that Global North countries committed to mobilise by 2020.

However, the Netherland's commitments are far too weak compared to the scale of global need. To meet its fair share towards a conservative estimate of USD 1 trillion in international finance for mitigation, adaptation, and loss and damage required annually by 2030, the Netherlands would need to provide finance on an order of USD 17.5 billion annually by 2030, if using ODI's approach to allocating fair shares between rich countries.[n] As noted in Section 3, this is meant to be indicative of the scale of additional effort required, not a definitive estimate of the Netherland's obligations.

The Netherlands has no climate finance that is earmarked for supporting Global South countries' phase-out of fossil fuel production. The 2023 Civil Society Equity Review report on the equitable phase-out of extraction suggests the Netherland's fair share towards financing a production phase-out globally would be an additional USD 3.4 billion per year, based on the Netherland's economic capacity and historical responsibility.[317]

Taken together, minimum estimates of the Netherlands' fair share of finance towards mitigation, adaptation, loss and damage, and extraction phase-out add up to almost USD 21 billion (EUR 19 billion) annually by 2030 – more than 10 times the size of the Netherland's commitment of EUR 1.8 billion by 2025.

Benchmark 5b: Work with other governments towards a global oil and gas phase-out.

The Netherlands has currently neither joined BOGA as any kind of member, nor endorsed the Fossil Fuel Non-Proliferation Treaty. However, they have signed the Clean Energy Transition Partnership. ***We find that the Netherlands rates as 'Unaligned'.***

The Netherlands has signed the CETP agreement on ending international finance to fossil fuels, and is one of six CETP signatories with new policies that further restrict international fossil fuel support but leave loopholes for fossil finance to continue.[318] In principle, as of 1 January 2024, the Netherlands will not financially support new upstream or midstream fossil fuel projects.

Benchmark 6: Design fiscal terms to align investment behaviour with production decline goals.

The fiscal regime in the Netherlands is in no way designed to align investments with production decline goals, nor does it have a neutral tax system. ***We find that the Netherlands rates as 'Grossly Unaligned'.***

The Netherlands has promised to phase out domestic fossil fuel subsidies by 2025 as part of the EU and G7; however, this commitment applies only to 'inefficient fossil subsidies'.[319] A recent report found that the country has fossil fuel subsidies of up to a staggering EUR 46.4 billion a year.[320]

Oil and gas production is taxed in the following way in the Netherlands:[321]

- **General Corporate Income Tax** (CIT) is 25 percent.
- **State Profit Share (SPS)** on ring-fenced oil and gas profits in the Netherlands is 50 percent, with all expenses subjected to a 10 percent uplift.
- **Surface rental payments** cost EU 784 per square kilometre for production areas, and between EUR 261 and EUR 784 per square kilometre for exploration areas.
- For onshore oil and gas, companies pay zero to seven percent **royalties** depending on production level. This increases to 25 percent when the price of imported crude oil is above EUR 25, and to 100 percent when there is no state participation in the production licence.

In addition, the Netherlands has several fiscal regimes that favour fossil fuel production:[322]

n Based on the Netherlands' historical responsibility for cumulative climate pollution, its gross national income, and its population size, ODI finds that the Netherlands' fair share towards Global North countries' existing USD 100 billion commitment to be 1.75 percent. We apply this same fair share allocation to USD 1 trillion as indicative of the required scale-up in support.

- **The 'small fields' policy:** This policy obliges the main trading and supply company, GasTerra, which is 50 percent state-owned, to act as a guaranteed buyer of gas from small fields to reduce uncertainties with regards to demand. The goal of this is encouraging the production of natural gas from smaller fields throughout the Netherlands.

- **Marginal fields and prospects incentive:** Certain small offshore gas fields give an additional investment allowance of 25 percent for the SPS, effectively amounting to a subsidy of 12.5 percent of the amount invested. Beginning in 2020, the Dutch government extended the investment allowance available to all new investments in offshore oil and gas production by making it an unconditional allowance, while also increasing the allowance from 25 percent to 40 percent. The resulting foregone tax revenue was estimated at EUR 170 million in 2020[323].

Benchmark 7: Adopt and implement just transition policies.

The Netherlands has some policies in place for transition away from oil and gas production, but they are not strong enough. ***We find that the Netherlands rates as 'Unaligned'.***

The early closure of the Groningen field has forced through more transition policies than in other countries. For instance:

- **The Energy Agreement for Sustainable Growth (2013):** A deal between government, employers, trade unions, and environmental organisations to achieve increased energy conservation, renewable energy, and a goal of 15,000 new jobs in these fields.

- **The National Climate Agreement (2019):** A set of policies and measures aimed at reducing greenhouse gas emissions. It addresses the impact of job reductions along the oil and gas chain, and states that 'active support and training for work in new sectors will be required, both for the sake of the people concerned and to reduce any shortages in those sectors'. It also states that 'another key area of focus is the funding from sectoral training and development funds, which can be used to create or fund cross-sector training programmes in collaboration, with the goal of increasing training opportunities and facilitating the labour market transition from surplus to shortage sectors'.[324]

These policies are important steps towards ensuring a transition of the economy, by committing to provide training to ensure that workers have the skills to thrive in new sectors. However, they are not strong enough to ensure a just transition away from fossil fuels. Of the six criteria listed under Fully Aligned, we find that the Netherlands has concrete commitments in only two areas: industrial policy to enable creation of high-quality new jobs and training provisions.

Benchmark 8a: Regulate greenhouse gas emissions from the production process.

There are policies in place to regulate and reduce greenhouse gases from the oil and gas sector, but we find that they are not strong enough. ***We find that the Netherlands rates as 'Unaligned'.***

The majority of Dutch regulations on climate and environment with regards to oil and gas exist via the EU:

- **EU ETS** (see the Norway section for explanation).

- **Industrial Emissions Directive:** Aims to prevent or reduce emissions of pollutants into air, water, and soil; and to reduce the generation of waste in industrial installations that have the potential to cause significant emissions to the environment.

- **Offshore Safety Directive:** Includes requirements for environmental management systems.

- In 2021, a **carbon tax** for the industry was introduced, starting at EUR 30/tCO_2 with a linear increase of EUR 125 to EUR 150/tCO_2 in 2030, including the ETS price. [325]

The Dutch government also passed the Climate Act (2019) which commits it to reducing greenhouse gas emissions by 49 percent by 2030, and 95 percent by 2050, each relative to 1990 levels.

The sectorial ambition for industry (not just oil and gas) in the Netherlands is to reduce emissions by approximately 59 percent by 2030 compared to 1990.[326] However, there are no mandatory or voluntary targets for reducing scopes 1 and 2 emissions from oil and gas specifically; and in the National Climate Agreement, there is no specific mention of the oil and gas sector.

Benchmark 8b: Protect ecologically-valuable areas from oil and gas production.

There are no laws or regulations in place to permanently protect ecologically-valuable areas from oil and gas production, and only poorly-imposed restrictions on oil operations in sensitive areas. ***We find that the Netherlands rates as 'Grossly Unaligned'.***

The entire Dutch section of the North Sea is part of the Dutch National Ecological Network (NEN).[327] The network is designed to link nature areas more effectively with each other, but it provides no other protection of the areas defined within NEN.

In addition, the North Sea coast, Voordelta, and the 'Vlakte van de Raan' (Raan Flats) are Natura 2000 areas,[328] and as such are protected under the Nature Conservancy Act. The Birds[329] and Habitats[330] Directives set out the overall legal framework for protecting and managing Natura 2000 sites. However, each EU country decides for itself how best to implement these directives. A report from the international NGO Oceana in 2020 showed that European MPAs are mere 'paper parks' that provide little actual protection.[331]

The valuable Waddenzee has high biological diversity and is an

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important area for both breeding and migrating birds, and was therefore inscribed on UNESCO's World Heritage List in 2009. Despite the fact that the Dutch government has protected the Waddenzee under the Ramsar Convention (in addition to other European legislation that also protects the area, like the Birds Directive, the Habitats Directive, and the Water Framework Directive),[332] the area is potentially threatened by oil and gas exploration and production plans, and UNESCO warns against further oil and gas extraction in Waddenzee.[333]

Benchmark 9: Plan for rapidly reducing oil and gas demand, in parallel with supply reductions.
We find that the Netherlands has a credible process and interim targets for reducing territorial emissions, with a net-zero target by 2050. In addition, it has a plan for a phase-out of gas by 2050. ***We find that the Netherlands rates as 'Partially Aligned'.***

After the EU passed its Fit for 55 package, the Netherlands also raised its ambitions, setting a target of 55 percent reduction by 2030 compared to 1990, and a net-zero target by 2050.[334]

In 2022, the emissions in the Netherlands were 30 percent lower than in 1990.[335] A briefing from the European Parliamentary Research Service in September 2021 found that the Netherlands' total emissions make up 5.2 percent of the EU total, and have decreased by 13.4 percent since 2005.[336] This is, however, below the EU-wide emissions reduction of 19 percent in the same period.

In April 2023, the Dutch government announced it would spend EUR 28 billion in the coming years to guarantee it would meet its 2030 climate goals; and that the measures it would take would range from building large offshore solar power fields to raising taxes for polluting industries.[337]

About 90 percent of homes in the Netherlands depend on natural gas for heating, and the Netherlands has made a commitment to phase out fossil gas by 2050.[338] As of March 2023, the national government is supporting 66 pilot neighbourhoods in natural gas-free heating and cooking, and is preparing to scale up the lessons learned from the pilot projects nationwide via the National Programme for Local Heat Transition (NPLW).[339]

7. GERMANY

Since 2000, Germany has been the lowest-producing country in the North Sea region. German production is in steady decline, having dropped by almost 50 percent over the past 10 years. However, its production has surpassed that of Denmark since 2019. The majority of German production (around 70 percent) is of gas.

It is important to note that while Germany has small oil and gas production compared to most other North Sea countries, it still produces a huge amount of coal, the emissions of which outstrip those from oil and gas by 19 to one.[340] It also is undertaking a massive build-out of liquefied natural gas infrastructure, with new terminals in Wilhelmshaven, Stade, Lubmin, Brunsbüttel, and Rügen[341].

While Germany has a plan to phase out coal (albeit at a pace that is not aligned with 1.5°C), the government has no such plan for oil and gas. Figure 12 illustrates that Germany must accelerate the decline of production from existing fields, in addition to ending any development or licensing of new fields, in order to phase out its oil and gas production by the early 2030s. Prohibiting licensing should be an uncontroversial first step, given unlicensed areas are not expected to result in new production until around 2045 – more than 10 years after Germany should end oil and gas production under an equity-based pathway.

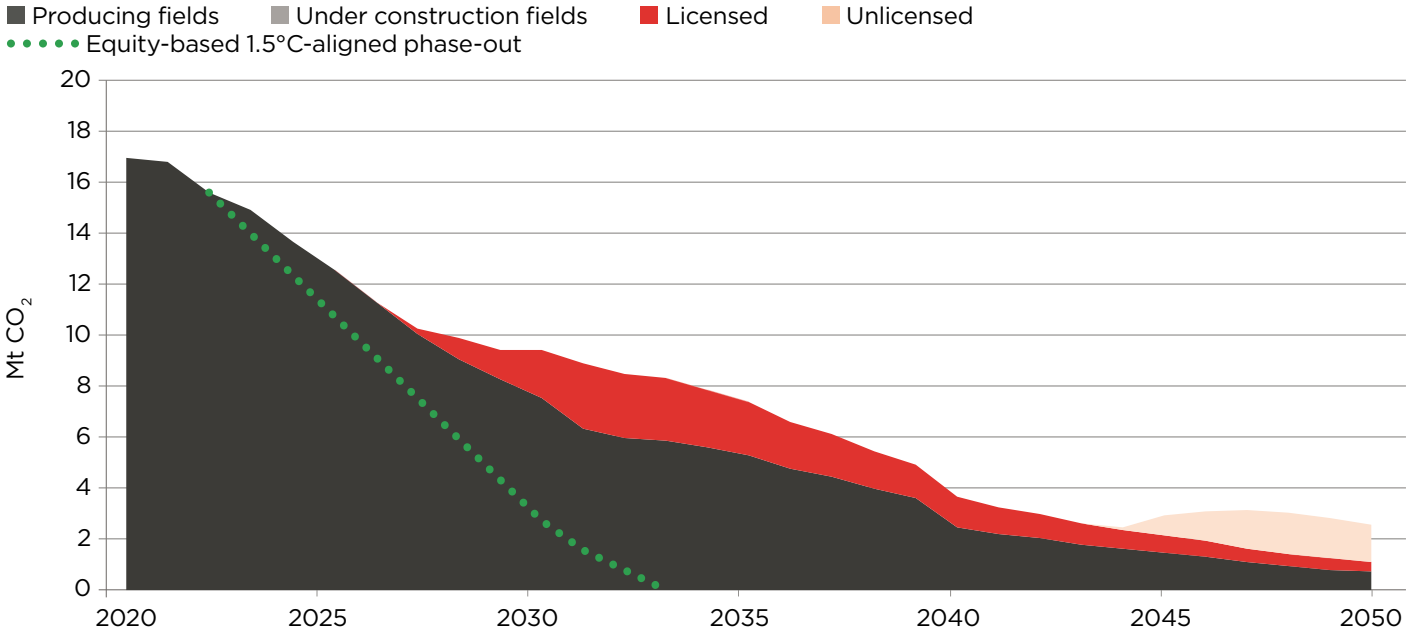
Benchmark 1: Align policy framework with the Paris goals and COP28 decision on transition away from fossil fuels. *Alignment of production with the 1.5°C warming limit is an implied goal of oil and gas production policy; but without specific guidance on how this is applied in practice.* ***We find that Germany rates as 'Unaligned'.***

Germany passed the Climate Action Law in 2019, the first of its kind in the country. The general purpose of the law is to ensure that Germany fulfils national and European climate targets; and is based on the Paris target of limiting global warming to well below 2°C, and possibly to 1.5°C. However, the law does not specify how these targets should be applied to oil and gas production. The main mechanism within it involves emissions reductions from sectors across society, including energy, without a plan for a full transition away from fossil fuels[343].

Benchmark 2: End new licensing. *There are active programmes of ongoing licensing without consideration of Paris-consistency, and there are no plans to limit licensing rounds, either temporarily or permanently.* ***We find that Germany rates as 'Grossly Unaligned'.***

Licences are regulated and handed out at a state level rather than by the federal government. There are no fixed licensing rounds; instead, interested parties can apply at any time. Licences are split into exploration licences, production licences, and mining proprietorships.

Figure 12: Projected annual CO_2 pollution from German oil and gas production, by current stage of development



Source: Oil Change International analysis of data from the Rystad Energy UCube (January 2024), Civil Society Equity Review[342]

Rainer Zenz, Flickr (CC BY-SA 3.0 DEED)

The **Federal Mining Act (1980)** is the central legislative act that regulates the exploration of oil and gas, and was amended to include European legislation on licensing, environment, health, and safety. It authorises federal states to issue their own regulations for oil and gas exploration and production, with their own state authorities responsible for issuing and enforcing these regulations.[344]

More than 90 percent of Germany's oil and gas production is from the states of Lower Saxony and Schleswig-Holstein, where the local State Authority for Mining, Energy and Geology is responsible for granting licences.[345]

Germany does not currently have any plans to end licensing, but does have a requirement to consider emissions for all administrative decisions and processes within the German Climate Law (though this law is not 1.5°C-compatible). However, this requirement has not been applied to stop new licensing to date.[346]

Benchmark 3: Stop approving new development.
There are no states in Germany that have restrictions on new field or project development. ***We find that Germany rates as 'Grossly Unaligned'.***

In June 2022, following Russia's invasion of Ukraine, Germany and the Netherlands agreed on a joint venture to drill for gas, with production expected to start in 2024. Initially, Lower Saxony had decided against issuing permits for this work, but stated that the situation had changed following the war and supported the move to end reliance on Russian-owned Gazprom.[347]

Benchmark 4: Establish and implement a Paris-aligned date to end oil and gas production.
Germany does not have a date for an end to oil and gas production, nor is it planning on setting one. ***We find that Germany rates as 'Grossly Unaligned'.***

Germany's main tool to reach emissions reduction goals is through Energiewende. It contains a number of targets for the expansion of renewable energies, and for reducing energy demand and the use of fossil fuels, but no targets for the end of oil and gas production in Germany.[348] There are many arguments about an end-date for coal in Germany, and as it is phased out, Germany is building new gas power plants to replace it, resulting in the build-out of liquefied natural gas infrastructure.

For many years, carbon capture and storage (CCS) has been off the table in Germany as a result of the controversy around using it for coal. However, the German government is currently putting together a Carbon Management Strategy that is likely to involve the use of CCS. It is not yet clear whether this strategy will be for use within the energy sector or only for hard-to-abate sectors, but relying on unproven technology to bring down emissions is a significant gamble, and ending fossil fuel production would be a safer route.[349]

Benchmark 5a: Provide a fair share of climate finance and other support to Global South countries, including to phase out production.

Germany has made some commitments towards climate finance, but its total international finance commitments come nowhere close to meeting a fair share of support, and it has made no commitments to financial or other support specific to enabling the phase-out of production by Global South countries. ***We find that Germany rates as 'Grossly Unaligned'.***

At COP27 in November 2022, Federal Chancellor Olaf Scholz affirmed the goal of increasing Germany's contribution to at least EUR 6 billion (approximately USD 6.5 billion[350]) per year by 2025 at the latest.[351] Germany reached this goal in 2022, when its total climate finance, for both mitigation and adaptation, reached EUR 6.3 billion.[352]

Analysis by the Overseas Development Institute (ODI) ranks Germany as having contributed its fair share towards the annual USD 100 billion of climate finance that Global North countries committed to mobilise by 2020, as determined by Germany's historical responsibility for cumulative climate pollution, gross national income, and population size.[353]

However, Germany's commitments are far too weak compared to the scale of the global need. To meet its fair share towards a conservative estimate of USD 1 trillion in international finance for mitigation, adaptation, and loss and damage required annually by 2030, Germany would need to provide finance on an order of USD 83 billion annually by 2030, if using ODI's approach to allocating fair shares between rich countries.[o] As noted in Section 3, this is meant to be indicative of the scale of additional effort required, not a definitive estimate of Germany's obligations.

Germany has not earmarked any climate finance for supporting Global South countries' fossil fuel phase-outs. The 2023 Civil Society Equity Review report on the equitable phase-out of extraction suggests that Germany should provide a minimum support of USD 12.4 billion per year.[354]

Taken together, minimum estimates of Germany's fair share of finance towards mitigation, adaptation, loss and damage, and extraction phase-out add up to more than USD 95 billion (EUR 88 billion) annually by 2030 – almost 15 times the size of Germany's commitment of EUR 6 billion by 2025.

Benchmark 5b: Work with other governments towards a global oil and gas phase-out.

Germany has committed to the CETP and supports fossil fuel phase-out in international negotiations, but is not actively working with other governments towards a global oil and gas phase-out, and has failed to fully implement the CETP. ***We find that Germany rates as 'Unaligned'.***

At COP28, the German Chancellor, Olaf Sholz, called for a phase-out of fossil fuels.[355] Despite this stated intention, Germany is not a member of BOGA and has not endorsed calls for a Fossil Fuel Non-Proliferation Treaty. It is a signatory to the CETP, but it has failed to fully implement the CETP properly, and its current legislation has significant loopholes allowing international finance for fossil fuels to continue. In particular, Germany's CETP policy does not fully rule out continued public finance for oil and gas fields, gas pipelines, gas infrastructure, and gas power plants.[356]

Benchmark 6: Design fiscal terms to align investment behaviour with production-decline goals.

The current system aims at 'neutrality', meaning that an investment that is profitable before taxation also should also be profitable after taxation. This system neither encourages nor discourages investment. ***We find that Germany rates as 'Unaligned'.***

There is no special taxation regime for oil and gas, and activities are subject to the same corporate tax as other industries. The ordinary income tax on corporations consists of corporate income tax, solidarity surcharge, and trade tax; and it varies between local authorities. The overall tax rate ranges from 22.8 percent to 34 percent**.**

The oil and gas industry is also subject to royalties based on a percentage of the market value of the oil and gas they produce. This ranges between zero percent and 40 percent, depending on various factors including the location of the oil and gas field and the method used for exploration. States are able to set different rates for these royalties. Some field-related expenses can be offset when calculating royalties.

Benchmark 7: Adopt and implement just transition policies.

Germany has some policies in place for transition away from oil and gas production, but they are not strong enough. ***We find that Germany rates as 'Unaligned'.***

Unlike other North Sea countries, Germany is also going through a transition away from coal, and has pledged to end its use by 2038 at the latest. To aid that transition, it has had policies in place for decades, including economic reorientation and diversification in coal mining areas, workforce support, initiatives focused on social well-being and quality of life, and environmental remediation and protection.[357] These policies stand in contrast to the phase-out of coal in places like the UK, where the government abandoned whole communities with no support.

It is clear from this that Germany has the knowledge and ability to enact a long-term just transition in the oil and gas sector, though it

o Based on Germany's historical responsibility for cumulative climate pollution, its gross national income, and its population size, ODI finds Germany's fair share towards Global North countries' existing USD 100 billion commitment to be 8.33 percent We apply this same fair share allocation to USD 1 trillion as indicative of the necessary scale-up in support.

has no plans to do so currently. Its Energiewende policy has targets of ensuring public buy-in to the energy transition, though does not contain provisions for public involvement in decision-making. A phase-out of gas will have considerably less impact on those working directly in the fossil fuel industry compared to the coal phase-out, as the gas industry is much smaller than the coal industry.

Benchmark 8a: Regulate greenhouse gas emissions from the production process.
There are policies in place to regulate and reduce greenhouse gases from the oil and gas sector, but we find that they are not strong enough. ***We find that Germany rates as 'Unaligned'.***

Germany is part of the EU ETS (see the Norway section for details), Industrial Emissions Directive (see the Netherlands section for detail), and Offshore Safety Directive (see the Netherlands section for detail).

The Federal Emissions Act establishes rules for avoiding harmful effects on the environment. The Federal Mining Act, which regulates oil and gas, also contains provisions for the protection of the environment. Flaring and venting is regulated and only allowed in very specific circumstances.[358] However, regulation of emissions from oil and gas production, as well as methane emissions, falls under a framework of technical self-administration of the German gas industry, and therefore lacks independent oversight.[359]
In order to reduce the emissions associated with production, Germany has also introduced energy efficiency standards for a number of sectors including oil and gas.

Germany has, as the rest of the EU, committed to the Global Methane Pledge, an initiative that aims to reduce methane emissions by 30 percent by 2030.[360] However, reports are that Germany has so far done little to introduce new measures to reduce methane emissions from oil and gas production.[361]

Germany has legislated targets to reduce emissions from both the energy and industry sectors under the Climate Action Law, though specific targets for the oil and gas sector are unclear.[362] However, the German government made plans in 2023 to revise the law, and water down sector-based targets.[363] The parliamentary adoption of this revision is pending as of February 2024.

Benchmark 8b: Protect ecologically-valuable areas from oil and gas production.
There are no laws or regulations in place to permanently protect ecologically-valuable areas from oil and gas production, and only poorly-imposed restrictions on oil operations in sensitive areas. ***We find that Germany rates as 'Grossly Unaligned'.***

Germany has the largest potential CO_2 emissions from fossil fuels projects in protected areas in Europe, and oil and gas activity is not generally prohibited in MPAs in Germany.[364] Protected areas in Germany exist mainly on paper, and have not prevented oil and gas exploration or extraction.

At 45.38 percent, nearly half of Germany's marine waters are protected, well over the EU average of 12.1 percent. The majority of MPAs are covered by Natura 2000, with some overlapping domestic designation.[365] As with the Netherlands, the part of the Waddenzee in German territory is inscribed on the UNESCO list, European legislation protects it.

Despite this, in 2022 Germany gave the green light to drill gas just north of the valuable Waddenzee, despite environmental concerns from the mayors of the two islands nearby.[366] In January 2024, following a lawsuit by environmental organisations from the Netherlands and Germany, a court ruling in The Hague suspended construction works to drill off the island of Borkum; the final court decision on the Dutch permit is expected later in 2024. The Dutch permit would be obligatory for this drilling site at the national border between the Netherlands and Germany.[367] Companies have produced oil and gas from Mittelplate (the largest oil field in Germany, located under the Waddenzee) for 35 years,[368] despite objections of environmental groups over concerns for the wildlife.

Germany has 17 boreholes for oil and gas extraction within MPAs, and has the highest number of threats per MPA in Europe.[369]

Benchmark 9: Plan for rapidly reducing oil and gas demand, in parallel with supply reductions.
Germany has a net zero-emissions target by 2045, and legislated interim targets to reduce emissions, but is already off track to reach its 2030 target. In addition, Germany has no targets for how to reduce oil and gas use by 2050. ***We find that Germany rates as 'Unaligned'.***

Under Energiewende, Germany has committed to phasing out nuclear energy and increasing the share of renewables, but not to a specific timeline for phasing out oil and gas use. Energiewende contains strategies for reducing fossil fuel reliance across all sectors of the economy, in line with reducing associated emissions;[370] but does not aim to end fossil fuel use entirely. In addition, the policy's plans for emissions reductions mainly include plans to switch over from coal to gas; and there is significant reliance on the liquefied natural gas build-out.

Germany's Energiwende policy aims to cut emissions by 65 percent by 2030, and 88 percent by 2040, with the eventual goal of net-zero by 2045. Overall, as of 2023, German emissions have fallen by 40.4 percent compared to 1990.[371] Current reductions put them off-track for their 2030 target.[372]

8. DENMARK

As of 2023, Denmark was the smallest oil and gas producer in the region, with production falling by close to 60 percent in the past five years. Over the past decade, oil has made up around 70 percent of Denmark's total production. However, a gas field redevelopment project in process could result in gas comprising nearly half of production in the mid-2020s.

Denmark has been a first mover in the North Sea region in restricting oil and gas licensing and committing to phase out its production. However, construction of new fields threatens to forestall a rapid phase-out of Danish production. As indicated in Figure 13, new fields could cause Danish production to remain above 2023 levels until after 2035. Instead, Denmark should be ending its production well before 2035 to do its part to limit warming to 1.5°C.

Benchmark 1: Align policy framework with the Paris goals and COP28 decision on transition away from fossil fuels. *Denmark has started to implement alignment with the 1.5°C warming limit to its oil and gas policy, but still lacks policies to actually implement this alignment in new development projects.* ***We find that Denmark rates as 'Partially Aligned'.***

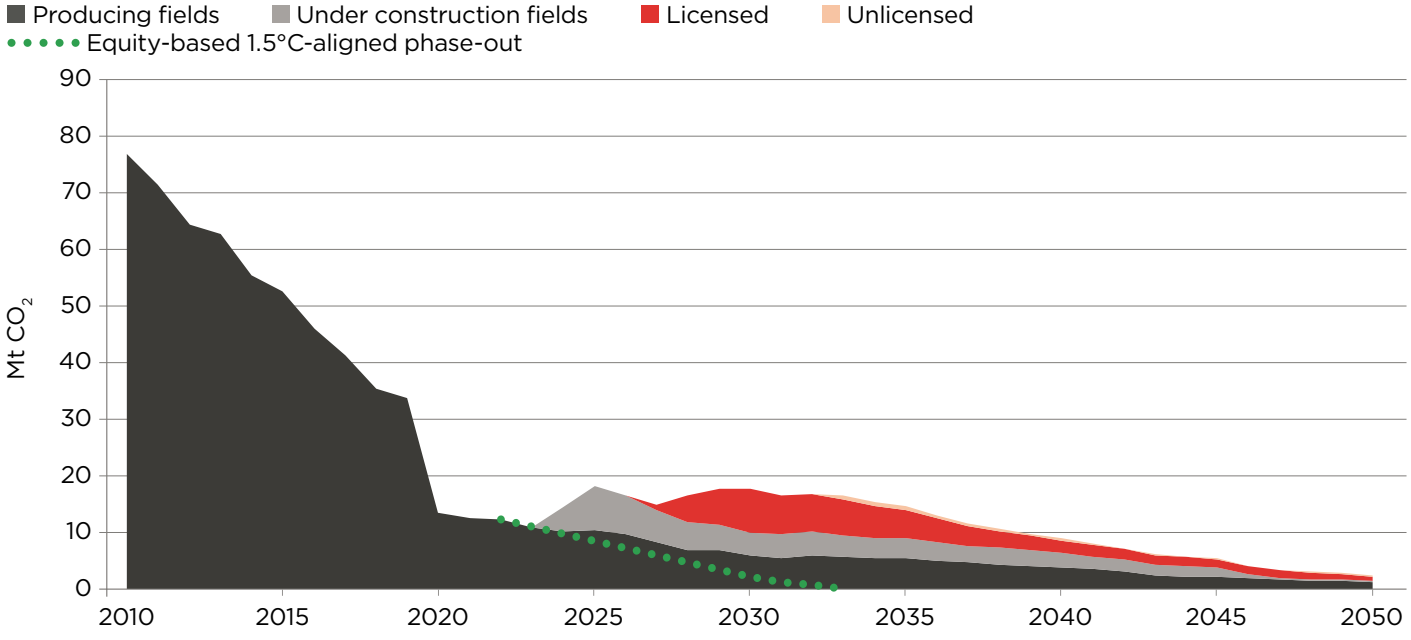
In 2020, the North Sea Agreement was finalised, which details a planned phase-out of the oil and gas industry with a cessation of all production and licensing by 2050.[374] One of the goals in the agreement is to align the country's oil and gas industry with the 1.5°C warming limit. This also led to the cancellation of all future state-initiated licensing rounds; an end-date for all production by 2050; a closure of an area outside Jylland for all exploration and extraction permits which covers an area of 23,380 square kilometres; and the decision that Denmark should work globally to influence other countries to do the same.

Benchmark 2: End new licensing. *Licensing is permitted only in limited circumstances and no ordinary state-initiated licensing rounds will be held.* ***We find that Denmark rates as 'Partially Aligned'.***

As of 2019, all oil and gas exploration onshore or in waters close to the mainland was closed. In December 2020 the North Sea Agreement was finalised, which entails an end to all oil and gas production by 2050.

Signatories to the North Sea Agreement agreed to a cancellation of the 8th licensing round and future state-initiated licensing rounds. However, it left open the possibility of licensing mini-rounds; and already-licensed operators may apply for operation at a neighbouring block.[375] There has been one mini-round opened since the agreement was finalised. In 2023, the oil company BlueNord applied to develop the oil and gas field called Elly-Luke, which initiated this mini-round. Yet, after public pushback, BlueNord retracted their application due to technical difficulties and overall commercial considerations.[376] On the basis of BlueNord's decision, the Danish

Figure 13: Projected annual CO_2 pollution from Danish oil and gas production, by current stage of development



Source: Oil Change International analysis of data from the Rystad Energy UCube (January 2024), Civil Society Equity Review[373]

Government decided to drop the mini-round altogether.[377]

All current and future licences will only last to the 2050 deadline.

Denmark's efforts to phase out its oil and gas production are admirable. However, the 'loopholes' in the North Sea Agreement from 2020 allow new licensing in limited circumstances. For Denmark to be fully aligned with Benchmark 2, they should not permit further licensing in any form, and this exclusion should be governed by legislation.

Benchmark 3: Stop approving new development.
Even though the North Sea Agreement restricts new licensing, there are no restrictions on new fields or project development. ***We find that Denmark rates as 'Grossly Unaligned'.***

In 2017, Maersk Oil decided to redevelop the Tyra gas field, which meant decommissioning the 35-year-old facilities and installing new ones.[378] Tyra was taken out of production in 2019, and was the biggest gas field in Denmark at the time. It is expected to start producing again in 2024, and once in operation, it is expected to deliver 2.8 billion cubic metres of gas per year, which amounts to 80 percent of the forecasted Danish gas production.[379]

In 2022, Danish authorities approved the new oil field Solsort, which started production in 2023.[380] In addition, there are other forthcoming projects like the Hejre field, which could lead to production of an additional 51 million barrels of oil equivalent.[381] Under the current policy framework, the Danish government could prolong the licence's expiration date from 2040 to 2047.[382]

In addition, the so-called 'Sole concession of 1962' has the potential to lead to new development without the need for new licensing.[383] Although the size of the area has diminished significantly over the years, it still contains several undeveloped reservoirs on which development projects can be approved without the need for any sort of licensing round; Freja, Valdemar Bo, Boje, Alma, Adda, and possibly more undeveloped projects within that licence would only need a approval from the Danish Energy Agency, not a new licence.

By implementing an end-date and limiting new licensing, Denmark is more likely to minimise new development. However, the end-date has not meant a stop to new field development, and the government has not made any concrete commitment to stop new development.

Benchmark 4: Establish and implement a Paris-aligned date to end oil and gas production.
Denmark has implemented an end-date by 2050. ***We find that Denmark rates as 'Partially Aligned'.***

Denmark is on a path to phase out production by 2050, as determined by government policy. However, a much faster phase-out of existing production is required for Denmark

to align with an equity-based 1.5°C phase-out pathway. The Civil Society Equity Review project found that applying principles of equity and precaution requires North Sea producers to reduce their production by over 80 percent by 2030, and to phase out production by the early 2030s in order to transition off of fossil fuel extraction.[384]

Benchmark 5a: Provide a fair share of climate finance and other support to Global South countries, including to phase out production.
Denmark's international finance commitments come nowhere close to meeting a fair share of support, but the country does provide some financial or other support specific to enabling the phase-out of production by Global South countries. ***We find that Denmark rates as 'Unaligned'.***
Denmark aims to contribute at least USD 1 billion of climate finance annually for mitigation and adaptation, according to the Danish government, with at least half being grant-based and the rest including both public and private funding.[385]

Analysis by the Overseas Development Institute (ODI) ranks Denmark as having contributed its fair share towards the annual USD 100 billion of climate finance that Global North countries committed to mobilise by 2020; its share is based on Denmark's historical responsibility for cumulative climate pollution, its gross national income, and its population size.[386]

However, Denmark's commitments are far too weak compared to the scale of the global need. To meet its fair share towards a conservative estimate of USD 1 trillion in international finance for mitigation, adaptation, and loss and damage required annually by 2030, Denmark would need to provide finance on an order of USD 6 billion annually by 2030, if using ODI's approach to allocating fair shares between rich countries.[p] As noted in Section 3, this is meant to be indicative of the scale of additional effort required, not a definitive estimate of Denmark's obligations.

As a co-founder of BOGA, Denmark helped set up BOGA's fund to support Global South governments that are exploring alternative development pathways beyond oil and gas.[387] The fund was announced at COP27, and seeded with an initial USD 10 million through 2023 to 2025. Denmark is the only North Sea country that offers earmarked support for fossil fuel phase-out, though the amount they offer remains limited. The 2023 Civil Society Equity Review report on the equitable phase-out of extraction does not include a separate estimate for Denmark outside of the EU's obligation. However, based on the report's methodology, we estimate that Denmark's minimum fair share towards financing a production phase-out globally would be an additional USD 1.3 billion per year.[388]

Taken together, minimum estimates of Denmark's fair share of finance towards mitigation, adaptation, loss and damage, and extraction phase-out adds up to USD 7.5 billion annually by 2030 – more than seven times the size of Denmark's goal of USD 1 billion annually.

Benchmark 5b: Work with other governments towards a global oil and gas phase-out.
Denmark is a co-founder of BOGA, has implemented their CETP commitment, and actively pushes fossil fuel phase-out in international negotiations. ***We find that Denmark rates as 'Fully Aligned'.***

Denmark is not just a core member of BOGA, but is one of the two governments that co-founded the alliance at COP26 in Glasgow in 2021.[389] As a core member, it has committed to end all oil and gas production by 2050, and is actively working on getting more jurisdictions to join BOGA.[390]

Denmark has also signed the CETP[391] and is one of eight signatories to be fully aligned with the pledge.[392] In international climate negotiations, Denmark is also urging fossil fuel phase-out.

Benchmark 6: Design fiscal terms to align investment behaviour with production decline goals.
The Danish fiscal regime actively aims to encourage investments in oil and gas, instead of aligning the industry with production decline rates. ***We find Denmark rates as 'Grossly Unaligned'.***

Oil and gas production tax has a 64 percent combined rate, which includes:

- 25 percent corporate income tax; and
- 52 percent hydrocarbon tax.

Operators also pay a supplementary tax when the average yearly oil price exceeds a certain threshold – for example, a five percent tax when the oil price exceeds USD 75 per barrel, and a 10 percent tax when it exceeds USD 85.[393]

There are a number of ways for companies to reduce their tax liability. For instance:

- Denmark does not ring-fence profits, which means losses from one field can offset gains from another, and help reduce the overall taxable income for combined operations.
- Losses under the corporate income tax can also offset onshore income tax, so if an offshore project makes a loss, it can be used to reduce the taxable income from onshore activities.
- Dismantling costs are tax-deductible under corporate income and hydrocarbon taxes.
- There is a tax refund for remaining hydrocarbon losses when a business closes.
- Qualifying expenditures under the hydrocarbon tax have a 30 percent uplift, so that only the most profitable fields are taxed;

p Based on Denmark's historical responsibility for cumulative climate pollution, gross national income, and population size, ODI finds Denmark's fair share towards Global North countries' existing USD 100 billion commitment to be 0.62 percent. We apply this same fair share allocation to USD 1 trillion as indicative of the scale-up in support required.

this is spread as a five percent deduction over six years.

- Losses can be carried forwards indefinitely.

- An incentive scheme was approved in 2017 to provide increased tax depreciation and higher hydrocarbon allowance until 2025.

Benchmark 7: Adopt and implement just transition policies.
Denmark has adopted some just transition policies, but should still make a stronger effort to ensure workers and communities are supported in the transition away from oil and gas. ***We find that Denmark rates as 'Partially Aligned'.***

The North Sea Agreement of 2020 is a strategic and legally binding policy that aims to secure a just transition from oil and gas. Denmark's oil and gas industry currently employs over 4000 people directly and indirectly. Measures in the North Sea Agreement include:[394]

- DKK 200 million to the Energy Technology Development and Demonstration Programme for research and development regarding CCUS in abandoned oil and gas fields;

- DKK 90 million in 2025 to transform the Esbjerg Harbor into an offshore wind power hub and for other related labour market transitions in the region; and

- The establishment of 14 climate partnerships between government and large private businesses, and a Green Business Forum for dialogue about the transition of the country's economy.

Denmark is also focussed on growing onshore and offshore wind production, and Denmark was awarded EUR 89 million through the EU Just Transition Fund to support their aim for net-zero by 2050.

The North Sea Agreement ensures local economic stimulus and stipulates plans to build diversified local economies in regions currently dependent on oil and gas (Esbjerg and North Jutland); and specifies a goal of social dialogue on transition-relevant policies.[395] The agreement also ensures industrial policies to enable the creation of new jobs in clean alternative sectors like offshore wind, but also in carbon capture and storage (CCS). Denmark should still make a stronger effort towards ensuring a just transition and the legal protection of rights at work, both in the declining oil and gas sector and in new sectors. Denmark needs to also increase the social protection of workers and communities during the course of the transition; provide training to ensure workers that have the skills to thrive in new sectors; and determine mechanisms to ensure transferable recognition of existing skills.

Benchmark 8a: Regulate greenhouse gas emissions from the production process.
Denmark has a credible plan and strategy for reducing greenhouse gas emissions from the oil and gas production process but with less stringent targets than what is needed. ***We find that Denmark rates as 'Partially Aligned'.***

Denmark has implemented new policies to lower emissions from the production process.

The Danish Energy Agency has environmental requirements with which all licensees must comply; and prior to production, licensees must submit a plan which includes an environmental impact assessment (EIA) and a plan for the measures they will take to ensure minimal environmental impact.

Companies emitting greenhouse gases also require permits from the Danish Energy Agency, with the following associated requirements:

- A ban on flaring (with the exception of when it is absolutely necessary for safety or operational reasons) was passed in July 2023, and went into effect in January 2024; and

- Until 2025, operators will pay for their CO_2 emissions through the EU ETS. From 2025 to 2030, operators will pay an additional EUR 50 per tonne of CO_2 in Danish CO_2 tax (EU ETS being deducted from this).

In 2023, the Danish Energy Agency projected that oil and gas industry scope 1 and 2 emissions would decrease to approximately 1.6 million tonnes of CO_2e in 2030, down from approximately 2 million tonnes of CO_2e in 2021. This forecast was based on the premise that no new policy measures would be introduced, and thus did not take into account the new ban on flaring.[396]

Benchmark 8b: Protect ecologically-valuable areas from oil and gas production.
There are no laws or regulations in place to permanently protect ecologically-valuable areas from oil and gas production, and only poorly-imposed restrictions on oil operations in sensitive areas. ***We find that Denmark rates as 'Grossly unaligned'.***

As in both the Netherlands and Germany, Denmark also gets its key environmental regulations from the EU. It also has Natura 2000 areas,[397] which are protected under the Nature Conservancy Act. The Birds[398] and Habitats[399] Directives define the overall legal framework for protecting and managing Natura 2000 sites, but each EU country decides how best to implement these directives.

According to the Marine Protection Atlas, around 18 percent of Danish marine areas are protected in some form.[400] However, a report from 2020 has assessed all 332 MPAs in Denmark, and found these MPAs to be another example of paper protection that does not meet the international criteria for nature conservation.[401] The overall assessment shows that only 4.8 percent of Denmark's total marine area is protected in accordance with the International Union on Conservation of Nature's definition.[402] A new report by the Danish Biodiversity Council (Biodiversitetsrådet), which advises the Danish government, estimates that the amount of protected nature is actually even lower than that.[403]

In the 2020 North Sea Agreement, Denmark did protect a marine area outside Jylland from all exploration and extraction permits, which covers an area of 23,380 square kilometres. Although the area has not been offered a status of MPA, it is protected from the oil and gas industry.

Benchmark 9: Plan for rapidly reducing oil and gas demand, in parallel with supply reductions.
We find that Denmark has a credible process and interim targets for reducing territorial emissions, with a net-zero target no later than 2050 and a plan to phase out oil and gas use. ***We find that Denmark rates as 'Partially Aligned'.***

Denmark has reduced its domestic emissions by 41 percent since 1990.[404] Its goal is to reduce emissions by 70 percent by 2030. The Danish Climate Act stipulates a commitment to reaching climate neutrality by 2050 at the latest, a goal that the Danish government has stated it wants to achieve by 2045.[405]

There are two central elements in the Danish strategy for phasing out oil and gas use: building out more renewable energy, primarily wind and bioenergy; and increasing energy efficiency in houses, buildings, and industry.[406]

Denmark has established an independent council called the Council for Energy Efficient Transition, whose primary task is to advise the Minister and the Ministry in connection with the development, coordination, and implementation of an overall energy-saving effort.[407] EU member states are now implementing the EU's new Energy Efficiency Directive (EED); and the Council for Energy Efficient Transition recommended that Denmark should set a national energy saving target which is higher than the requirement in the EED.[408]

Of the five North Sea countries, Denmark has so far reduced its emissions most rapidly, and is the country that has the most ambitious 2030 target for reducing emissions.

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9. CONCLUSION AND RECOMMENDATIONS

None of the five North Sea countries have a Paris-aligned oil and gas policy. Out of 11 categories for five countries, there are only two ratings of 'Fully Aligned'. The most common ranking across all five countries is 'Grossly Unaligned', with Norway coming out worst with seven Grossly Unaligned ratings out of 11. None of the North Sea countries are on-track to reduce emissions or production in line with 1.5°C, and all are failing to plan domestically for the changes that will need to happen societally for a just transition. Denmark outperforms the other countries in a number of areas. Norway achieves a 'Fully Aligned' rating on regulating greenhouse emissions from the production process; and Denmark achieves a 'Fully Aligned' rating due to its membership in BOGA and its work to support phase-out internationally.

Ultimately, it is beyond time for North Sea countries to show the real climate leadership that they have both a responsibility and ability to enact. Yet not one of the five North Sea Countries currently scores sufficiently against the policy benchmarks we have set out in this report. In fact, most are alarmingly inadequate, at a time when the science could not be clearer about the need for a full and fast phase-out of fossil fuels if we are to maintain a livable climate. As the head of the IEA, Fatih Birol, declared in 2021: 'if governments are serious about the climate crisis, there can be no new investments in oil, gas and coal, from now – from this year'.[409] The North Sea countries must stop approving any new exploration or extraction; and all five countries must implement stronger phase-out policies, and focus on leading the way towards a rapid and equitable phase-out of oil and gas production.

There is still time for North Sea countries to take the action that will put them on the right path domestically and support other countries to do the same, but they

Fully aligned **Close to aligned** **Partially aligned** **Unaligned** **Grossly unaligned**	NORWAY	THE UK	THE NETHERLANDS	GERMANY	DENMARK
1. Align policy framework with the Paris goals and COP28 agreement to transition away from fossil fuels	🔴	🟠	🟠	🟠	🟡
2. End new licensing (including extensions of existing licenses)	🔴	🟠	🔴	🔴	🟡
3. Stop approving new development	🔴	🟠	🔴	🔴	🔴
4. A Paris-aligned date for ending production	🔴	🔴	🟡	🔴	🟡
5. International cooperation					
A. Provide a fair share of support to Global South countries, including to phase out production	🔴	🔴	🔴	🔴	🟠
B. Work with other governments towards a global oil and gas phase-out	🟠	🟠	🟠	🟠	🟢
6. Design fiscal terms to align investment behaviour with production decline goals	🟠	🔴	🔴	🟠	🔴
7. Adopt and implement just transition policies	🔴	🟠	🟠	🟠	🟡
8. Regulation of environmental impact					
A. Regulate greenhouse gas emissions from the production process	🟢	🟡	🟠	🟠	🟡
B. Protect ecologically valuable areas from oil and gas production	🔴	🔴	🔴	🔴	🔴
9. Plan for rapidly reducing oil and gas demand, in parallel with supply reductions	🟠	🟠	🟡	🟠	🟡

must take such action now and without caveats or exceptions for the fossil fuel industry.

We recommend that all five North Sea countries align all policies with a 1.5°C scenario. Of the 11 benchmark categories we have presented, we have highlighted below the three that we see as particularly important for the governments of the North Sea countries to achieve in the near-term (two to three years).

1. STOP APPROVING NEW DEVELOPMENT

In several of the countries, there is a live debate on whether they should prohibit new licensing for oil and gas. However, the science is clear: stopping new licensing is not enough. If we are to stay within safe climate limits, there can be no investments in new oil and gas development, including in areas that have already been licensed but not yet approved for production.

Due to extensive past exploration, the North Sea countries' combined potential CO_2 emissions from approving development of already-licensed fields amounts to a staggering 4.9 billion tonnes of CO_2.

The top priority of any government that claims to be serious about staying within the 1.5°C target should therefore be to stop all approval of new oil and gas development. To date, none of the North Sea countries have committed to do this.

2. ESTABLISH AND IMPLEMENT A PARIS-ALIGNED DATE TO END OIL AND GAS PRODUCTION.

As we have shown in this report, we are already on the threshold of exceeding our carbon budget. The amount of oil and gas already in production takes us beyond the 1.5°C target. It is therefore not enough to just stop new development; countries also need to start phasing out existing production of oil and gas.

Applying principles of equity and precaution requires North Sea producers to be the leaders in the global transition away from fossil fuels: this means reducing their production by over 80 percent by 2030, and phasing out production by the early 2030s, in order to ensure a just transition globally.

This is why it is essential for North Sea countries to establish and implement an end-date of no later than 2035 for their oil and gas production. Achieving the Paris goals at a global level depends on a faster phase-out in the Global North.

3. ADOPT AND IMPLEMENT JUST TRANSITION POLICIES.

Investing in just transition policies is key to enabling a phase-out of fossil fuels. The principle of just transition is that a healthy economy and a clean environment can and should co-exist. The process for achieving this vision should be a fair one that should not cost workers or community residents their health, environment, jobs, or economic assets; whilst also meeting international obligations.

As we have shown, there is a huge variety in the nature and extent of transition policies among the five North Sea countries. The best example of the five countries is Denmark, which introduced a number of policies when implementing an end-date for oil and gas production. In this regard, Denmark should serve as an inspiration to the four other North Sea countries.

The six key elements of a just transition policy that all five counties should implement as soon as possible are:

- Social dialogue with trade unions, community leaders, businesses, and other stakeholders on all transition-relevant policies;
- Industrial policy to enable creation of high-quality new jobs in clean alternative sectors;
- Local economic stimulus and plans to build vibrant, diversified local economies in regions currently dependent on oil and gas;
- Legal protection of rights at work, both in the declining oil and gas sector and in new sectors;
- Social protection of workers and communities during the course of the transition; and
- Training provision to ensure workers have the skills to thrive in new sectors, and mechanisms to ensure transferable recognition of existing skills.

ADDITIONAL STEPS FOR FULL ALIGNMENT

For the other six benchmarks, we recommend:

- Countries should align production with the 1.5°C warming limit and with other aspects of the Paris Agreement (such as equity and just transition) as a legislated goal of oil and gas production policy. Additionally, we recommend that the relevant policy framework and strategy documents provide clear ways to enact this policy into plans for production decline, taking into account well-grounded and equitable assumptions about how efforts are to be shared between countries.
- No further licensing should be permitted in any form, and this exclusion should be governed by legislation.
- International finance contributions should equal the country's fair share according to principles of equity, including both a fair share of concessional finance to enable a production phase-out by Global South producers and support for technological transfer and reforming aspects of international financial, trade, investment, and tax architecture that restrict phase-outs.
- Countries should be Core Members of BOGA, implement their CETP commitments, and actively urge fossil fuel phase-out in international negotiations.
- Each country should introduce a tax regime that aims to disincentivise investment in excess

of the phase-out pathway, and to maximise public benefit from revenues during remaining years of production.

- Countries should ensure there is a credible plan and strategy for reducing absolute scope 1 and 2 upstream emissions of greenhouse gases by at least 70 percent by 2030, compared to 2022 levels; or, alternatively, a plan to reduce the emissions intensity of scopes 1 and 2 upstream greenhouse gases below 8kg CO_2e/boe by 2030. Countries should also guarantee that installations are subject to strict rules on greenhouse gas emissions, with strong verification measures and meaningful penalties; and that flaring and venting of gas are prohibited, except in emergencies for safety purposes.

- The North Sea countries should prohibit all oil and gas activity in all MPAs and in buffer zones to an extent judged by experts to be sufficient in relation to the activity and threat; they should also undertake an active process of identifying additional areas to become MPAs in order to achieve the Kunming-Montreal 30 percent target of protected marine environment.

- Countries should introduce a legislated process for creating and approving reductions in territorial emissions, consistent both with Paris goals at a global level and a faster phase-out in the Global North, namely reaching zero emissions not later than 2035. Countries should explicitly plan to phase out fossil fuel consumption in parallel with supply.

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