2022

September

Mind the Gap: Enhancing NDCs before COP27

Sustainability Industry Report

The Al-Attiyah Foundation

01 OUR MEMBERS

The Al-Attiyah Foundation is proudly supported by:

Under the Paris Agreement process, countries are required to submit new or updated nationally determined contributions (NDCs) at least every five years, and successive NDCs should represent progression and a higher level of ambition. The first round of new or updated NDCs was due in 2020.

What enhancements are being made to NDCs in the run-up to COP27 in Egypt? How do these revised NDCs compare with the initial NDCs? How significant are scaling up of ambitions by the major greenhouse gas emitters? How does this first round of revisions meet the scale of ratcheting up of ambitions required in future NDCs to meet the goals of the Paris Agreement?

SUSTAINABILITY REPORT

This research paper is part of a 12-month series published by the Al-Attiyah Foundation every year. Each in-depth research paper focuses on a current sustainability topic that is of interest to the Foundation's members and partners. The 12 technical papers are distributed to members, partners, and universities, as well as made available on the Foundation's website.

03 EXECUTIVE SUMMARY

- At COP26, it was flagged that countries' first nationally determined contributions (NDCs) were drastically less than required to limit the global temperature rise to 1.5°C.
- Out of 194 NDCs, 140 were updated before the start of COP26. This represents a coverage of just over 72%. By September 2022, this number increased to 151, so coverage is still not complete.
- A key reason for the remaining countries' failure to update their NDCs is the perception that a scaled-up climate action plan would not be in alignment with their envisaged economic development needs.
- Also, some updated NDCs are a mere resubmission of the previous NDC with creative obfuscations to appear enhanced, and do not really signal a scale-up of ambition in meeting the Paris Agreement goals.
- The NDCs of economies with net zero targets by or before 2050, whether as law, policy, or pledge, could lead to a 27% reduction in GHG emissions by 2030, relative to 2015.
- However, countries with post-2050 net zero targets will increase their emissions by 10% between 2015 and 2030, lowering the net global emissions reduction to a mere 9% over this period.
- According to the IPCC, global CO_2 emissions need a reduction of 45% by 2030 to limit global average temperature increase to 1.5°C, or 25%, to limit warming to 2°C. The overall emissions reduction achieved by the updated NDCs collectively is nowhere near this requirement.
- The Covid-19 pandemic and the economic impact of current geopolitical tensions has hampered the development of stronger 2030 goals in lieu of recovery finance, international support, and capacity strengthening.
- A key expectation from COP27 and COP28 will be the rebuilding of trust between countries at odds with one another, in a way that clears up current barriers to aggressive and urgent action on clean energy solutions before the release of NDCs for 2025.

The 2015 UNFCCC[i] Paris Agreement established a goal to limit average global temperature rise to well below 2°C and to pursue efforts to limit it to 1.5°C, which was reiterated at the COP26 Summit in Glasgow in 2021 with the tagline "keeping 1.5 degrees alive". To meet this goal, every country was expected to prepare and communicate a Nationally Determined Contribution (NDC) that ratcheted up ambition every five years.

An NDC is a country's self-defined mitigation and adaptation goal. It can include targets, measures, and policies, and forms the basis for national climate action plans. Apart from targets, measures, and policies, it also contains information on the needs for and/or the provision of finance, technologies, and capacity building to undertake the mitigation actions outlined within the NDC text.

The first set of NDCs were intended nationally determined contributions (INDCs), which were submitted ahead of the Paris Agreement and then converted to final NDCs upon countries' acceptance of the agreement. Countries initially had until 2020 to prepare and communicate an updated or enhanced version of their first NDC but got an additional year to 2021 due to the pandemic which rescheduled the COP26 Summit.

Many countries merely adapted their INDCs into their final first NDCs at the time of ratifying the Paris Agreement without alterations, enhancements, or scaling-up of ambition. This was flagged at COP26 as being one of the reasons global progress on climate action has remained drastically less than required to limit average global temperature rise to 1.5°C, and countries were urged to ratchet up national ambition to align with global goals and deliver more ambitious, updated NDCs at upcoming COP summits.

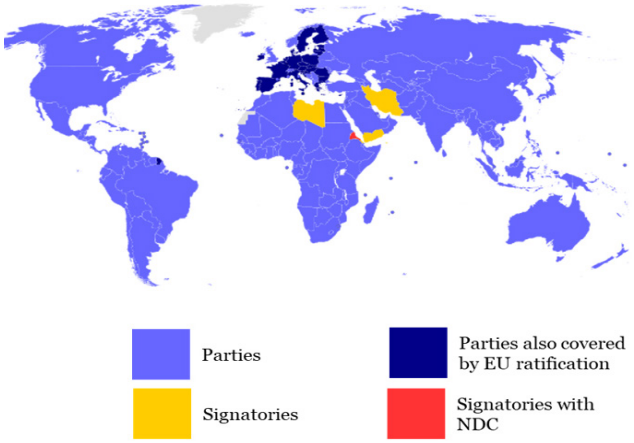
All countries who have submitted NDCs are signatories of the Paris Agreement, with the exception of Eritrea, which is the only nation to do so without formally ratifying the agreement[iii]. Out of 197 countries[ii], 193 are parties to the Agreement, and 194 have submitted NDCs.

Table 1 Annex I, Annex II, and Non-Annex I classification of the Paris Agreement parties[vi]

Type	Description
Annex I	• Include industrialised countries that were OECD members in 1992, **plus** countries with **economies in transition** (EIT parties) including the Russian Federation, the Baltic States, and several Central and Eastern European states
Annex II	• Consists of the OECD members of Annex I, but **not** the EIT parties • Required to provide financial resources to enable developing countries to help them mitigate and adapt to the effects of climate change • Should "take all practicable steps" to promote development and transfer of environmentally friendly technologies to EIT parties and developing countries
Non Annex I	• Mostly **developing countries** • Certain groups of developing countries are recognised as being especially vulnerable to the adverse impacts of climate change, or to the potential economic impacts of climate change response measures (in countries that rely heavily on income from fossil fuel production and commerce) • These countries can be considered as **"vulnerable"** Non Annex I, which are different from the rest of Non Annex I
Least Developed Countries	• Typically, countries with **limited capacity to respond to climate change** and adapt to its adverse effects • Currently, 49 parties are classified as LDCs • Parties are urged to take full account of the situation of LDCs when considering funding and technology-transfer activities.

Iran, Libya and Yemen are not signatories of the Paris Agreement and have not submitted NDCs[v] . Iran had submitted an INDC ahead of the Paris Agreement, but never converted it to an NDC.

Figure 1 Countries party to the Paris Agreement[iv]



Countries with initial NDCs were urged to update these by COP26 in order to put the goals of the Paris Agreement within reach. Out of 194 NDCs, 140 were updated in the form of either a new (second) NDC or enhanced NDC (strengthened/updated version) shortly before the start of COP26[vii]. This represents a coverage of just over 72%. By September 2022, this number increased to 151, representing coverage (78%) that is still significantly less than the expected 100% submissions.

Similar to the acceptance process of the agreement in 2015, small and vulnerable countries have taken the lead in submitting new or updated NDCs. Countries like Ethiopia have engaged their entire governments to strengthen their NDCs. Larger countries have been slower to join and only 16 out of the G20 had submitted new, updated NDCs by October 12, 2021, less than 3 weeks before the start of COP26. Turkey was the last G20 member to ratify the agreement before the summit, but its first NDC (which is the unchanged version of its 2015 INDC), can hardly be considered new or updated.

On a regional basis, Europe submitted new or updated NDCs at the highest rate before COP26, while countries like South Korea and the UAE, who also submitted new NDCs, planned to make further updates during the forthcoming NDC cycle.

For example, the UAE released an updated version of its second NDC on September 12, 2022, setting more ambitious targets for curbing emissions in response to calls at COP26 for greater efforts to combat climate change[viii]. Being the host of the 2023 COP28 summit should have also fed into this strengthened ambition.

Figure 2 Map of latest NDC submission of each country[ix]

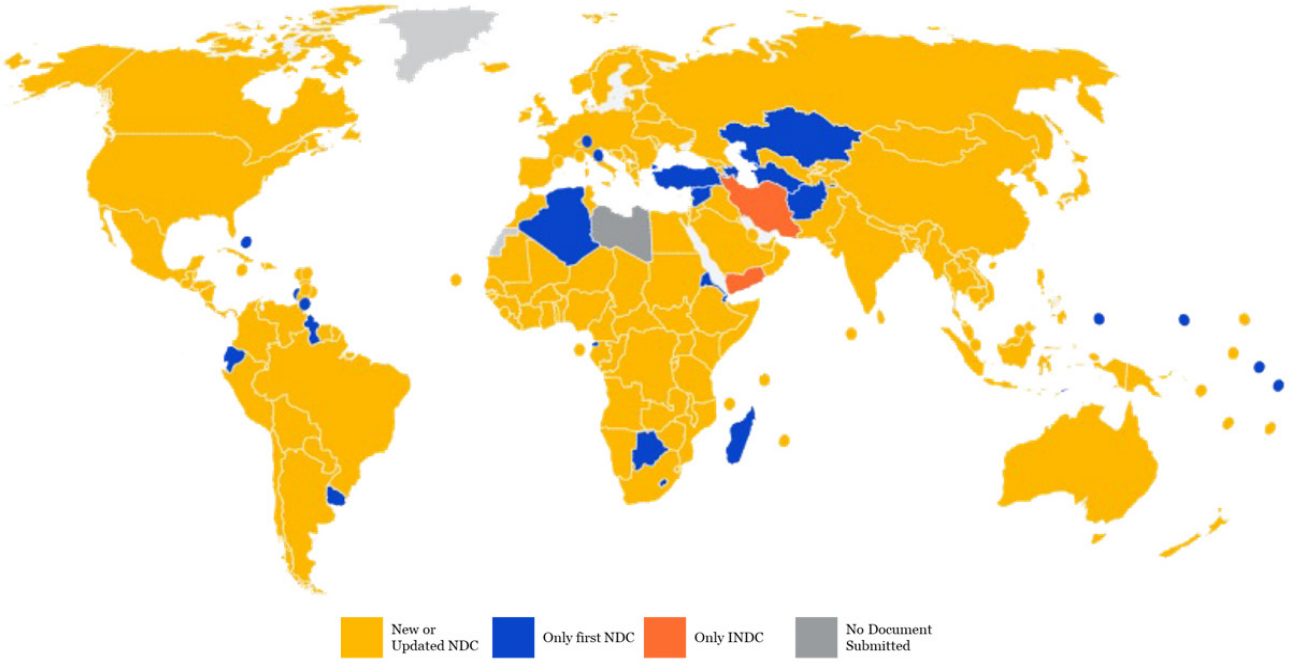
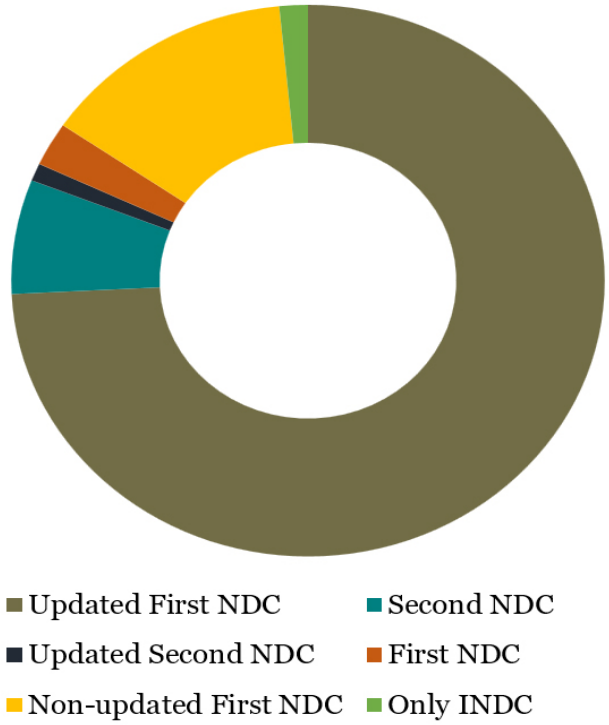


Figure 3 Breakdown of NDCs by submission[xi]



Fifty-two (52) parties out of the 193 submitted an update to their first NDC in 2020. A further 79 submitted an update to their first NDC in 2021, making a total of 131 to update their initial NDCs by end-2021. Four (4) of these submitted their update during COP26 (Argentina was the only country to submit a second, new NDC during COP26), and another 5 submitted their update after the conclusion of the summit by end-2021.

Thirteen (13) parties submitted an update to their first NDC in 2022, making a total of 144 parties out of the 193 to the Paris Agreement to submit an update to their first NDC.

Seven (7) parties submitted second NDCs in 2021, including the UAE, who submitted an update to its second NDC in 2022. Two (2) other parties submitted second NDCs in 2022. So far 13 parties to the agreement have submitted a second NDC to the UNFCC interim public registry which is tasked with capturing countries' NDCs under the Paris Agreement[x]. Out of this, 3 were submitted in 2020, and only 1 in 2019 (Suriname).

Five (5) parties submitted their first NDC in 2020, with Marshall Islands being the only party to submit an update to its second NDC the same year. Three (3) countries have only submitted INDCs, and 27 have provided no update to their initial NDCs.

ANALYSIS OF COUNTRIES THAT HAVE NOT UPDATED THEIR FIRST NDCS

Out of the 27 countries that have non-updated first NDCs, Afghanistan, Algeria, Kazakhstan, Turkey, and Uruguay have somewhat material emissions, with Turkey contributing the most, at 0.96%, making it the 18th largest GHG emitter globally[xii]. Algeria and Kazakhstan are the next biggest emitters among this group, but nearly 41% lower than what Turkey emits despite having near-complete dependency on oil and gas and being large producers.

The remaining countries in this group are mainly small island developing states (SIDs), LDCs, or conflict-prone states, and are recognised as countries with limited capacity to adapt to or mitigate the worst impacts of climate change. These countries are also the least responsible amongst the parties to the Paris Agreement for climate change and are dependent on others to ensure that significant action is taken in support of its goals.

Without Turkey, Algeria, and Kazakhstan, this group is responsible for 1.2%[xiii] of global emissions, compared to a total of 3.4% when Turkey, Algeria, and Kazakhstan are included.

According to Climate Action Tracker, Turkey's target is not in line with "any interpretation of a fair approach" to meeting the Paris Agreement, and "if all countries were to follow Turkey's approach, warming would exceed 4°C"[xiv]

Turkey also has the highest GDP per capita among these 27 countries (US$ 8,536[xv]) and the 72nd highest in the world, which would ideally make it responsible for dispensing financial and technological aid to lesser-able countries in their fight against climate change.

The country is planning to decrease its dependency on natural gas imports through increased renewable energy capacity, but also sees the use of domestic lignite coal, with 32 GW currently still in the pipeline. The use domestic of lignite coal will significantly increase its emissions.

Algeria and Kazakhstan, meanwhile, have also not updated their NDCs, although these were submitted much earlier than Turkey in 2016. The main reason behind these countries' failure to increase their mitigation ambitions is the perception that a scaled-up climate action plan would not be in alignment with their envisaged economic development due to the potentially harmful economic impacts, as they are both strongly dependent on fossil fuel activity.

For Kazakhstan, its NDC wants to "achieve the OECD countries' level of life quality"[xvii], which requires sustained revenues from fossil fuel exports. Still, it is reportedly working towards an updated NDC, which will identify priorities in the agriculture, forestry, and water sectors, and also develop an adaptation component, including effective adaptation measures and an implementation roadmap[xviii].

Table 2 How do major non-updated first NDCs fare in terms of Paris Agreement-aligned action?[xvi]

Indicator	Turkey	Kazakhstan	Algeria
Policies & Action	Critically insufficient	Insufficient	Critically insufficient
Domestic Targets	Critically insufficient	Insufficient	Critically insufficient
Fair Share Target	Critically insufficient	Insufficient	Critically insufficient
Climate Finance	Information incomplete	*~ not assessed ~*	*~ not assessed ~*
Land Use & Forestry	Not significant	Not significant	Not significant
Net Zero Target	Poor	Poor	*~ n/a ~*
Overall Rating	Critically insufficient	Insufficient	Critically insufficient

An important consideration needs to be made when assessing NDCs updated by the end of 2021 (hereafter referred to as 2020 NDC Updates[xix]). Some updated NDCs are a mere resubmission of the previous NDC with creative obfuscations to appear enhanced, and do not really signal a scale-up of ambition in meeting the Paris Agreement goals by 2030. These include 2020 NDC Updates submitted by Australia, Indonesia, Mexico, and Singapore (who account for 5% of global emissions and 5.2% of the 2030 emissions gap[xx]), although Australia, under a new government, subsequently submitted another update to its NDC in June 2022[xxi], which has new, stronger targets for emissions reduction by 2030.

Others have submitted an NDC update with a new target, but do not really include a significant increase in 2030 ambition. These include 2020 NDC Updates submitted by some of the world's largest emitters, including Brazil, China, India, Russia, and Saudi Arabia, who have been accused of including "hot air" targets that are higher than the upper range of current policy projections. Others in this list include the Philippines, Switzerland, Tunisia, and Vietnam.

Fact Box 1 What are "hot air" targets?[xxii]

The term "hot air" refers to countries setting themselves targets so out of tune with a normal increase in emissions, even if no climate policies are undertaken, that their NDC targets are almost certainly achieved and overachieved by a large margin due to insufficiently ambitious NDC targets.

2020 NDC Updates with the most ambitious, "non-hot air" goals in emissions reduction by 2030 belong to Norway, the UK, most of the EU-27, Kenya, Chile, Argentina, and Ukraine.

For example, 2020 NDC Updates provided by the UK, Norway, and Kenya are now classified as "almost sufficient" in meeting the 1.5°C temperature rise limit of the Paris Agreement[xxiii], which is the highest rating achieved so far by some of the world's largest countries. Tiny Pacific island-states such as Vanuatu, one of the world's most climate-vulnerable countries[xxiv], are possibly the only to qualify for a "sufficient" rating despite negligible emissions of their own.

Fact Box 2 What do climate adaptation efforts of the updated NDCs focus on?[xxvi]

A nation's adaptation efforts typically focus on food security and production, terrestrial and wetland ecosystems, freshwater resources, human health, key economic sectors and services, coastal and low-lying areas, disaster risk management (DRM), urban areas and other human habitats, and ocean ecosystems. Often, they are in synergy with various mitigation efforts to achieve co-benefits by addressing issues like climate-smart agriculture, food waste reduction, vertical farming, adapting coastal ecosystems, increasing share of renewables in energy generation, improving energy efficiency, CCUS, fuel switching and fuel price reforms, and moving to a circular economy for better waste management.

Climate adaptation has also received greater focus in these countries' NDCs, particularly adaptation planning and stronger national adaptation plans (NAPs), underpinned by more time-bound quantitative adaptation targets, as well as associated indicator frameworks[xxv]. Countries like the UK and Norway (as well as a handful of others whose updates are not fully on par with the requirements of the Paris Agreement, such as the UAE and Chile) are

increasingly linking their adaptation efforts with the 2030 Agenda for Sustainable Development and the SDGs.

Others who have submitted stronger NDC targets still fall short of what is needed globally to meet the Paris Agreement's 1.5°C temperature limit, although the scaling-up of ambition from these countries has upgraded their status from "critically insufficient" prior to the 2020 NDC Updates to now "highly insufficient" or "insufficient". These include Canada, Colombia, Japan, New Zealand, Nigeria, Peru, Saudi Arabia, South Korea, and the US among others.

Table 3 details the changes in ambition, emphasis on mitigation and/or adaptation in different sectors, emphasis on mitigation and/or adaptation methods, specificity of targets, and the overall rating of the 2020 NDC Updates of major countries. It should be noted that improved ambition for emissions reduction by 2030 is not sufficient to close the emissions gap as required by the Paris Agreement, as the levels of improvement in ambition for most updating countries are still much lower than what is needed to keep 1.5°C within reach.

Table 3 Summary of changes in ambition, scope, and targets of major countries' 2020 NDC Updates[xxvii]

Country	Improved ambition for emissions reduction by 2030	Change of emphasis (Sectoral)	Change of Emphasis (Methodological)	Specificity of Target(s)	Upgraded Overall Rating of NDC Update in meeting PA Goals
Australia	Yes	• New policies for investment into *batteries*, *solar*, and *electricity grid* • Fund for decarbonising industry • Declining emissions baseline	• Inclusion of LULUFC, but not separate, making it hard to assess emissions from O&G • Utilisation of high levels of carbon offsets (*indicative*) • Australian Carbon Credit Units (ACCUs) • Stoppage of carryover to meet 2030 targets	• Emissions 43% below 2005 levels by 2030 (including LULUFC) • 375 $MtCO_2e$ absolute emissions level in 2030 (excl. LULUFC)	• Highly Insufficient to Insufficient
Canada	Yes	• 100% zero-emission car and passenger truck sales by 2035 instead of 2040 • No other changes of emphasis on sectors coverage	• No significant methodological changes, but acknowledgement of need for "further policy development and implementation" as mitigation measures outlined in the NDC are not sufficient to meet new targets according to government modelling	• Emissions at least 40-45% below 2005 levels by 2030; inclusion of the reference to "at least" suggests Canada may have the ultimate intent of exceeding this target • 427-467 $MtCO_2e$ absolute emissions level in 2030 (excl. LULUFC)	• Critically Insufficient to Highly Insufficient

China	Yes	• Strengthened non-fossil fuel share target • Major non-CO_2 sectors (agriculture, industry) excluded from NDC targets, but integrated within overall mitigation planning of the NDC	• Substantial forestry sinks • Large-scale implementation of carbon capture, use and storage (CCUS) technologies	• Peaking CO_2 emissions before 2030 instead of around 2030 • Lower CO_2 emissions per unit of GDP by >65% in 2030 compared to 2005 levels • Share of non-fossil fuels in primary energy consumption to around 25% in 2030, instead to around 20% • Increase forest stock volume by around 6 billion cubic metres in 2030 from 2005 levels, instead of 4.5 billion cubic metres • Bring total installed capacity of wind and solar power to >1.2 TW by 2030 • Expected emission levels (13.2-14 $GtCO_2e$ in 2030) are well within China's projected current policies emissions trajectory (13.2-14.5 $GtCO_2e$), meaning China could still achieve many of its NDC targets without substantially increasing mitigation policy	• *Unchanged*; still Highly Insufficient
Japan	Yes	• Higher share of renewables in power generation • Higher share of nuclear power in power generation	• Adoption of the revised Plan for Global Warming Countermeasures which describes a comprehensive set of policy measures to achieve 2030 targets • Approval of the Japanese Basic Energy Plan to deliver on the 2030 targets	• Emissions 46% below 2013 levels (including LULUFC) instead of the 26% reduction in the previous NDC • 813 $MtCO_2e$ absolute emission levels in 2030 (excl. LULUFC), 24.7% lower than previous NDC update • 36-38% power generation from renewables in 2030 • 20-22% power generation from nuclear in 2030 • Still keeps 19% coal-fired power generation (inconsistent with full coal phase-out needed by 2030)	• Highly Insufficient to Insufficient
India	No	• Increased non-fossil capacity in power generation • Environmentally conscious lifestyle choices (Lifestyle for Environment initiative) • Stress on developed countries to fulfil climate finance commitments	• ~ *Inconclusive* ~	• Reduce emissions intensity to 45% below 2005 levels • Increase non-fossil capacity in power generation to 500 GW • Achieve 50% of energy requirement from renewable sources by 2030 • Reducing emissions by 1 billion tonnes by 2030	• *Unchanged*; still Highly Insufficient

Nigeria	Yes	• New actions in the waste sector to reduce emissions • Green jobs assessment • Nature-based solutions • Clean cooking solutions	• Approved REDD+ Strategy • Updated GHG coverage to include HFCs	• Unconditionally reduce emissions by 20% below BAU and by 47% with international support • 321-348 $MtCO_2e$ absolute emissions level in 2030 (unconditional) • 213-276 $MtCO_2e$ absolute emissions level in 2030 (conditional)	• Almost Sufficient
Norway	Yes	• Net zero emissions from land sector in 2030	• Joint NDC implementation with EU and Iceland • Increased transparency of NDC • Utilisation of market mechanisms under Article 6	• Emissions 55% below 1990 levels, an improvement compared to previous target of at least 40% reduction • 24.6-27.2 $MtCO_2e$ absolute emissions level in 2030 (excl. LULUCF), 16-24% lower than previous NDC	• *Unchanged*; still Insufficient
Saudi Arabia	Yes	• Emissions reductions are based on continued substantial fossil fuel exports with a "get out clause" in the NDC if international climate change policies negatively affect these exports • Higher share of renewables in electricity mix • Plant 450 million trees by 2030	• Saudi Green Initiative (an initiative foreseeing afforestation and land restoration measures to increase forestry sinks) • Still no baseline projection	• 50% electricity generation from renewables and 50% from gas by 2030 • Increase forestry sink to 200 $MtCO_2e$ by 2030 from 9 $MtCO_2e$ in 2012 • 2030 emissions reduction target now 278 $MtCO_2e$ from 130 $MtCO_2e$ from previous NDC	• Critically Insufficient to Highly Insufficient
UK	Yes	• Energy (including transport) • Industrial Process and Product Use (IPPU) • Agriculture, land use, LULUFC, waste	• International credits • Legally binding Climate Change Act • Long-term Low Emission Development Strategy • Industrial Decarbonisation Strategy • Transport Decarbonisation Plan • The Hydrogen Strategy	• Emissions 68% below 1990 levels by 2030 from previous target of 57% reduction • Up to 251 $MtCO_2e$ absolute emissions in 2030 (excl. LULUFC)	• Insufficient to Almost Sufficient
USA	Yes	• Power grid and clean technologies • Carbon-free electricity • Electrification of federal fleet • Replacement of at least 20% school buses with electric models • Climate science research and innovation	• ~ *Inconclusive* ~	• Emissions 50-52% below 2005 levels by 2030 (including LULUFC), from previous target of 26-28% below 2005 levels by 2025 • 3,715-4,219 $MtCO_2e$ absolute emissions in 2030 (excl. LULUFC)	• Critically Insufficient to Insufficient

OVERALL IMPACT OF THE UPDATED NDCS

An important metric in assessing the overall emissions reduction implied by the 2020 NDC Updates is net zero pledges undertaken by the updating countries. The ratchet mechanism of the Paris Agreement urges parties to continually update their NDCs, which has resulted in a number of them pledging net zero targets as a means of limiting global warming to 1.5°C.

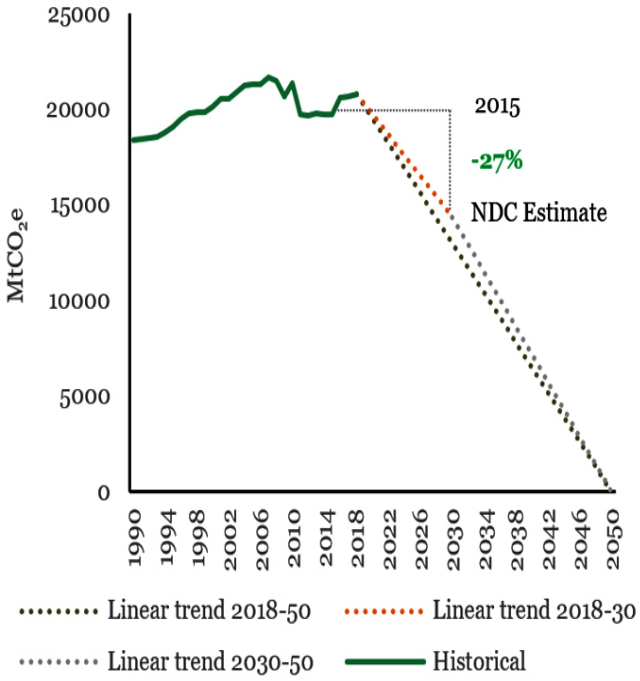
Out of the 71 countries with net zero ambitions today, only 17 have these enshrined in law. Thirty-eight (38) have them in a policy document, and 16 as a declaration or pledge[xxviii]. Unsurprisingly, all those with net zero targets as law have 2050 as their cut-off year, except for Russia, which also has its net zero target in law, but with a cut-off of 2060.

According to the Columbia University's Center on Global Energy Policy (CGEP), the NDCs of economies with net zero targets before or by 2050, whether as law, policy, or pledge, could lead to a 27% reduction in GHG emissions by 2030, relative to 2015[xxix]. However, countries with post-2050 net zero targets will increase their emissions by 10% between 2015 and 2030, lowering the net global emissions reduction to a mere 9% over this period[xxx].

Accurately assessing the emissions reduction implied by the 2020 NDC Updates is a challenging task, as not all countries align on their range of approaches to achieve their "more ambitious" targets by 2030. There also remain countries with 2020 Updated NDCs that do not actually have improved ambition for emissions reduction by 2030, such as India.

A wide range of base years (1990, 2005, 2010, 2013, 2015, 2018), differing economic outlooks, and ambiguity in NDC language adds further complexity in the quantification of implied overall emissions reduction.

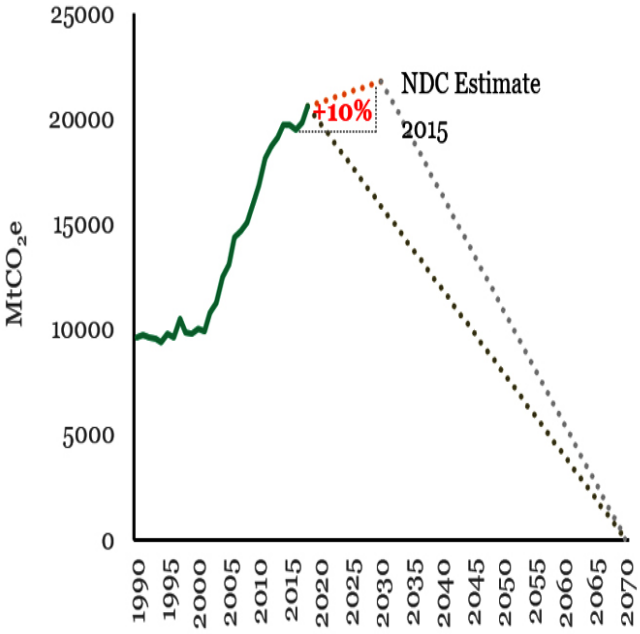
Figure 4 Total GHG emissions for countries with net zero targets before or by 2050, and emissions reduction between 2015 and 2030 resulting from their collective NDCs[xxxi]



This is also compounded by weak consensus on what constitutes "net zero" for those who do have net zero targets: some do not specify which GHGs are included; others refer simply to climate neutrality, others to carbon neutrality, and include varying quantities of offsets. This makes estimations difficult without proper definition and scrutiny.

Countries with net zero targets after 2050, including China, India, and other large emitters, also run the risk of dominating uncertainty in global mitigation efforts, because their emissions are poised to increase to 2030 first[xxxii] before they begin declining.

Figure 5 Total GHG emissions for countries with net zero targets after 2050 and emissions reduction between 2015 and 2030 resulting from their collective NDCs[xxxiii]



According to the IPCC, global CO_2 emissions need a reduction of 45% by 2030 (based on 2010 levels) to limit global average temperature increase to 1.5°C, or 25% (based on 2010 levels) to limit warming to 2°C[xxxiv]. Clearly the overall emissions reduction achieved by all of the 2020 NDC Updates (including by countries with and without net zero commitments) collectively is nowhere near this requirement[xxxv].

Taking all 194 NDCs into account (updated, new, or otherwise) emissions might still lead to a temperature rise of 2.7°C by the end of the century[xxxvi]. The 10% increase in emissions by countries with 2020 NDC Updates and post-2050 net zero targets is a cause of concern as it is in sharp contrast with calls for rapid, sustained, and large-scale emission reductions to prevent the most severe climate consequences and suffering.

Equally worryingly, is the fact that it waters down the gains made in emissions reduction by countries with pre-2050 net zero targets by a significant margin, resulting in an overall emissions reduction of only 9% by 2030, which leaves the emissions gap at risk of widening further if these countries do not urgently ratchet up ambition in subsequent NDCs to levels consistent with 1.5°C pathways.

Despite an increase in ambition to 2030 in the majority of 2020 NDC Updates, the emissions gap remains "excessively large". The coronavirus pandemic and resultant economic crisis, followed by geopolitical turmoil, energy price volatility and fears of an economic recession, played a role in the delayed timing of updated NDC submissions, although many countries recognised the opportunity of leveraging NDC processes as a "gateway to a greener and more sustainable Covid-19 response and recovery plan"[xxxvii].

NDCs of countries like Nigeria are integrated into their countries' economic recovery and Covid-19 recovery plans for the environmental sector. NDCs of countries such as Costa Rica are included in national decarbonisation plans, generating data and evidence on the linkages between NDCs and green recovery. Others have undertaken analysis on how their NDC measures can impact recovery, such as Ghana, Indonesia, Malaysia, and Tunisia, while others, like Thailand, have used their NDCs to inform elaborate fiscal incentive options for climate action that can also advance economic recovery through carbon funds and taxes[xxxviii].

Although these are positive developments, they are increasingly focussed on making a socio-economic case for ambitious climate action, including focussing on the need for external financing and technological support, particularly among NDCs of Non-Annex I countries.

This has somewhat detracted from the development of more ambitious and stronger 2030 emissions reduction goals, in lieu of recovery finance, international support and collaboration, and capacity strengthening.

The impact of the war in Ukraine could further undermine progress towards ensuring a timely transition to climate-smart solutions in Annex I countries that are transitioning to market economies[xxxix], resulting in either delayed updates to NDCs or ambition that is still not sufficient to close the emissions gap for the next 5-year cycle of NDC commitments (2025-2030).

Table 4 summarises some of the key expectations from NDCs in the runup to COP27 (dubbed the "COP of Implementation") in Egypt and COP28 in the UAE.

Table 4 What are the likely expectations / goals from NDCs at upcoming COP summits (COP27, COP28)?[xl]

Expectation / Goal	Parties most required to meet Expectation/Goal	Level of Progress Achievable by COP27/28	Support Required	Challenges
Stronger 2030 ambition to narrow emissions gap	• Universal, but limelight mainly on large hydrocarbon producers without strong 2030 ambition in existing NDCs • Major Non-Annex I countries without strong 2030 ambition in existing NDCs (like India) or "hot air" ambition (like China)	●●●	• Paris Agreement Implementation and Compliance Committee review • Clear definitions of and distinctions between vague, interchangeably used terms like climate neutrality, carbon neutrality, low-carbon future, decarbonised future, to enable all ambitions to universally align with a 1.5C pathway	• Lack of singular base year(s) to measure emissions reduction ambition against • Lack of familiarity with UNFCCC frameworks to account for impact of economic and socio-cultural differences in establishing emissions reduction targets in line with a 1.5°C pathway
Universal Net Zero Pledge	• Universal	●●●●	• Formal integration of requirement for net zero pledges in subsequent versions of NDCs by UNFCCC	• Risk of excessively delayed timelines to achieve net zero by countries reliant on fossil fuel trade for their economies • Lack of consensus on net zero definitions
Narrowing funding gap to 2030	• Mainly large Annex I and Annex II countries, other G20 countries	●●	• Paris Agreement Implementation and Compliance Committee review of Annex I and II countries' limited climate finance so far • Transparency on finance and investment through simple and harmonised approaches • Considering international development aid as part of pre-defined use of proceeds for green sovereign issues (?)	• Lack of consensus on applicability of fair share target and global stocktake based on countries' GDP • Risk of countries rejecting classification as Annex I or II countries to be able to receive aid instead of dispense aid (such as Turkey)
Article 6 Action Plans	• Universal	●●	• International cooperation on carbon credit market mechanisms • Establishment of administrative infrastructure • Clarity around types of activities that may give rise to credits • Clarity around methodologies and level of private sector participation	• Lack of consensus on eligibility criteria for credits (particularly for GHG avoidance) • Weak definitions of methodologies for applying corresponding adjustments • Unclear scope of disclosure obligations
Phasing-out Fossil Fuel Usage	• Mainly large hydrocarbon producing countries, both Annex I and II and Non-Annex I countries	●●	• Institutional investment shift to climate-friendly energy solutions • End of financing for fossil fuel activities • Fixed deadlines to end fossil fuel subsidies • Fixed deadlines to end E&P licences • Change of COP language to say "phase-out" instead of "phase-down" fossil fuel	• Risk of non-alignment by major hydrocarbon producers and fossil fuel users • Weakening of language in NDCs • Lack of enforcement mechanisms
Ambition for inclusivity and Just Transition	• Universal	●	• Clarity around multilateral support frameworks • Emerging markets leading discussions vis-à-vis developed markets • Stronger accountability from developed markets towards funding and Just Transition principles • Higher momentum and participation from civil society and private actors	• Risk of processes around Just Transition being steered by developed markets once again • Weakening of language in NDCs of larger economies • Lack of accountability and reporting mechanisms

- With COP27 and COP28 hosted by two of the world's leading oil and gas producing countries, oil and gas producers have a unique opportunity to shift the conversation towards the importance of sustainable oil and gas activity in achieving near-term gains in climate neutrality before fossil fuels are unable to compete with improved non-fossil technologies.
- The energy crisis following Russia's invasion of Ukraine has already resulted in many countries stressing access to or securing fossil resources, rather than focussing on clean energy solutions, in the near-term, which could shape NDC language differently from earlier versions. Debates over emerging markets' rights to develop their fossil fuel resources might also be tackled differently in these countries' NDCs by establishing conditions for clean energy-based development that utilise oil and gas to get these countries off the ground in their climate journeys.
- Solutions like carbon-neutral production, CCUS, and "diminishing" shares of oil and gas in future energy mixes might therefore dominate new or updated NDCs submitted by hydrocarbon producers ahead of these two summits.
- Challenges to energy security in the immediate-term could cause some backpedalling at COP27, but oil and gas producers can work to prevent this by showcasing clean solutions beyond the obvious CCUS and renewable-integrated production. They can drive a stronger emphasis on battery storage and fuel-agnostic generators, clean hydrogen production from fossil fuels, non-emitting uses of fossil fuels (e.g., to produce long-lived plastics or non-metallic materials) as well as higher energy efficiency measures in final energy use, particularly in sectors that are large consumers of oil and gas.
- A key expectation from both summits will be the rebuilding of trust and cooperation between countries at odds with one another in a way that clears up current barriers (economic and political) and enables a return to aggressive and urgent momentum on clean energy solutions before the release of NDCs due for submission in 2025, so that countries can "remain on track" to achieving the Paris Agreement's goals.

19 CONCLUSION

Rising fuel prices, high inflation, and the changing structure of international politics might demonstrate every excuse to disrupt and delay climate action, but countries' NDCs (particularly the 2020 Updates) have broadly depicted a rise in collective ambition, even if they fall short of the level required to meet 2030 climate goals.

Both COP27 and COP28 have the potential to fire the "starting gun" to enhance implementation of the Paris Agreement by profiling the needs of emerging markets, vulnerable countries, and laying out areas where concrete action is needed. This in turn can inform smarter, updated NDCs for the next cycle, particularly in the areas of ambition, accountability, finance, and adaptation.

Ambitious, real, on-the-ground action and support, updated regularly in countries' NDCs can be an excellent enabler of the overall ambition outlined in the Paris Agreement in a way that will deliver climate justice to those most in need. Future enhanced NDCs developed on this basis will also better realise countries' differentiated responsibilities and capacities, driving a multi-speed but just transition.

i. United Nations Framework Convention on Climate Change
ii. An official reason for not yet having ratified the Paris Agreement has not been provided by Eritrea
iii. UNFCCC, "The Paris Agreement", https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement
iv. UNFCCC; Qamar Energy Research; Image by L.tak - Own work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=48320267
v. UNFCCC, "Eritrea: NC3", https://unfccc.int/sites/default/files/resource/Eritrea%20NC3.pdf
vi. UNFCCC, "Parties & Observers", https://unfccc.int/parties-observers
vii. World Resources Institute, "Making Sense of Countries' Paris Agreement Climate Pledges", October 2021, https://www.wri.org/insights/understanding-ndcs-paris-agreement-climate-pledges
viii. The National, "UAE sets more ambitious targets to cut greenhouse gas emissions", September 2022, https://www.thenationalnews.com/uae/environment/2022/09/12/uae-sets-more-ambitious-targets-to-cut-greenhouse-gas-emissions/
ix. Qamar Energy Research, with data from https://www.climatewatchdata.org/ndcs-explore
x. UNFCCC, "NDC Interim Registry", https://unfccc.int/news/ndc-interim-registry
xi. Qamar Energy Research, with data from https://www.climatewatchdata.org/ndcs-explore
xii. As of 2019; with data from https://www.climatewatchdata.org/ghg-emissions?source=CAIT
xiii. Qamar Energy Research
xiv. Climate Action Tracker, "Turkey", September 2022, https://climateactiontracker.org/countries/turkey/
xv. ClimateWatch, "Turkey", https://www.climatewatchdata.org/countries/TUR?end_year=2019&start_year=1990
xvi. Data from Climate Action Tracker; for Kazakhstan from Qamar Energy Research
xvii. UNDP Global NDC Support Programme, "Kazakhstan", https://www.ndcs.undp.org/content/ndc-support-programme/en/home/our-work/geographic/europe-and-cis/kazakhstan
xviii. UNDP Global NDC Support Programme, "Kazakhstan", https://www.ndcs.undp.org/content/ndc-support-programme/en/home/our-work/geographic/europe-and-cis/kazakhstan
xix. 2020 NDC Update refers to an NDC being updated by end-2021 (an extra year instead of end-2020 due to the pandemic)
xx. The emissions gap is defined as the difference between where global GHG emissions are heading under the current NDCs and where science indicates emissions should be in 2030 to be on a least-cost path towards limiting warming to 1.5°C
xxi. Climate Action Tracker, "Australia", August 2022, https://climateactiontracker.org/countries/australia/targets/#expand_target
xxii. For more: https://www.climate-resource.com/tools/ndcs/methods
xxiii. Climate Action Tracker
xxiv. The Guardian, "Vanuatu, one of the most climate-vulnerable countries, launches ambitious climate plan", August 2022, https://www.theguardian.com/world/2022/aug/14/vanuatu-one-of-most-climate-vulnerable-countries-launches-ambitious-climate-plan
xxv. SDG IISD, "NDC Synthesis Report Shows Increased Focus on Adaptation, SDG Linkages", https://sdg.iisd.org/news/ndc-synthesis-report-shows-increased-focus-on-adaptation-sdg-linkages/
xxvi. For more: https://www.climate-resource.com/tools/ndcs/methods
xxvii. Qamar Energy Research; UNFCCC NDC Registry; Climate Action Tracker; Climate Analytics
xxviii. Energy & Climate Intelligence Unit, "Net Zero Scorecard", https://eciu.net/netzerotracker
xxix. Columbia University CGEP, "Tallying Updated NDCs to Gauge Emissions Reductions in 2030 and Progress toward Net Zero", March 2022, https://www.energypolicy.columbia.edu/research/report/tallying-updated-ndcs-gauge-emissions-reductions-2030-and-progress-toward-net-zero
xxx. Columbia University CGEP, "Tallying Updated NDCs to Gauge Emissions Reductions in 2030 and Progress toward Net Zero", March 2022, https://www.energypolicy.columbia.edu/research/report/tallying-updated-ndcs-gauge-emissions-reductions-2030-and-progress-toward-net-zero
xxxi. Qamar Energy Research, with data from https://www.energypolicy.columbia.edu/research/report/tallying-updated-ndcs-gauge-emissions-reductions-2030-and-progress-toward-net-zero
xxxii. Qamar Energy Research; CGEP
xxxiii. Qamar Energy Research, with data from https://www.energypolicy.columbia.edu/research/report/tallying-updated-ndcs-gauge-emissions-reductions-2030-and-progress-toward-net-zero
xxxiv. UNFCCC, "Full NDC Synthesis Report: Some Progress, but Still a Big Concern", https://unfccc.int/news/full-ndc-synthesis-report-some-progress-but-still-a-big-concern
xxxv. According to the UNEP Emissions Gap Report for 2021, all new pledges for 2030, including new or updated NDCs and other 2030 commitments, will reduce projected 2030 emissions by only 7.5%
xxxvi. Qamar Energy Research; SDG IISD,"UN Reports Find Updated Climate Commitments "Fall Far Short" of Paris Goal", October 2021, https://sdg.iisd.org/news/un-reports-find-updated-climate-commitments-fall-far-short-of-paris-goal/
xxxvii. UNDP, "Impacts of COVID-19 on raising ambition of national climate pledges under the Paris Agreement, or Nationally Determined Contributions (NDCs)", https://data.undp.org/content/covid-impact-on-ndc/
xxxviii. UNDP, "Impacts of COVID-19 on raising ambition of national climate pledges under the Paris Agreement, or Nationally Determined Contributions (NDCs)", https://data.undp.org/content/covid-impact-on-ndc/
xxxix. OECD, "List of Annex I Countries", https://www.oecd.org/env/cc/listofannexicountries.htm
xl. Qamar Energy Research

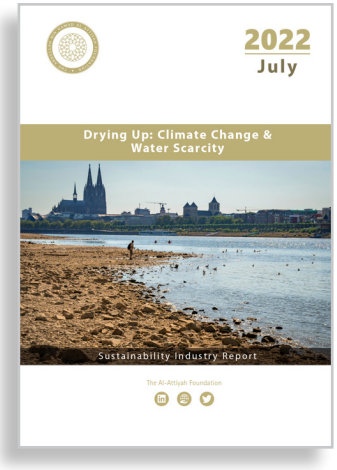
Have you missed a previous issue? All past issues of the Al-Attiyah Foundation's Research Series, both Energy and Sustainability Development, can be found on the Foundation's website at www.abhafoundation.org/publications

August – 2022

The Role of the Middle East in Global Climate Diplomacy

The Middle East is playing a growing role in international climate diplomacy through giant clean energy investments on its own soil, and also in emerging regions (particularly Africa).

(QRCO.DE)

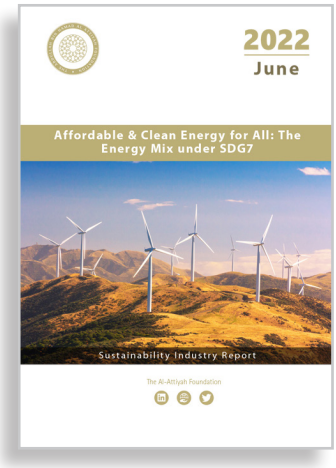


July – 2022

Drying Up: Climate Change & Water Scarcity

Climate change will alter patterns of precipitation, river flow and evaporation. At the same time, water use is increasing in many countries. This brings increasing challenges of providing sufficient, affordable, high-quality water for agriculture, human needs, and industry, while not depriving ecosystems.

(QRCO.DE)



June – 2022

Affordable & Clean Energy for All: The Energy Mix under SDG7

Sustainable Development Goal 7 (SDG7), which is among the 17 UN SDGs established in 2015, aims to "ensure access to affordable, reliable, sustainable and modern energy for all by 2030." Despite reasonable progress between 2015 and 2020, advances seem to have stalled, creating concerns that success by 2030 is out of reach.

(QRCO.DE)

Our partners collaborate with The Al-Attiyah Foundation on various projects and research within the themes of energy and sustainable development.

Qatar Foundation
Unlocking human potential لإطلاق قدرات الإنسان

KAHRAMAA
Qatar General Electricity & Water Corporation

World Petroleum Council

جامعة قطر
QATAR UNIVERSITY

جامعة حمد بن خليفة
HAMAD BIN KHALIFA UNIVERSITY

COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

UİP-ICP
ULUSLARARASI İŞBİRLİĞİ PLATFORMU
INTERNATIONAL COOPERATION PLATFORM
İSTANBUL

ISAG
Istituto di Alti Studi in Geopolitica e Scienze Ausiliarie

MITSUI & CO.

إرثنا
earthna

GORD
المنظمة الخليجية للبحث والتطوير
Gulf Organisation for Research & Development

United Nations Global Compact

NATIONAL COUNCIL ON U.S.-ARAB RELATIONS

GULF TIMES

The Al-Attiyah Foundation

Tel: +(974) 4042 8000,
Fax: +(974) 4042 8099
www.abhafoundation.org

Barzan Tower, 4th Floor,
West Bay.
PO Box 1916 Doha, Qatar

AlAttiyahFndn
The Al-Attiyah Foundation
Al-Attiyah Foundation