

The Approach of OPEC Member States to Addressing Climate Change and Carbon Emissions Reduction (Original Research)

Mohsen Abdollahi *

Persian Text pp. 37-62

(DOI) : 10.22066/CILAMAG.2025.2053248.2687

Date Received: 11 Feb.2025

Date Accepted: 1 Aug.2025

Extended Abstract

Climate change is now an undeniable scientific reality, and addressing its effects has become a major concern for both developing and developed countries. These changes, along with the measures taken to combat them, pose significant challenges to all nations, particularly developing states. For member states of the Organization of Petroleum Exporting Countries (OPEC), the impact is even more severe. In addition to the general damage caused by climate change and the responses to it, these countries will face additional losses stemming from reduced oil revenues. Research indicates that the economic damage to the GDP of these nations is nearly five times greater than that experienced by other countries. Specifically, the ambitious goal of achieving net-zero carbon emissions will likely reduce oil revenues for OPEC states by nearly half within the next two decades.

Consequently, it is essential to examine the stance taken by these nations regarding the reduction of greenhouse gas emissions, particularly carbon, in the context of the global climate regime. This article aims to investigate OPEC members' participation in climate change agreements, especially the Paris Agreement, and to explore what approach these states should adopt in response to global climate initiatives and the goal of net-zero carbon emissions.

It is important to note that, according to most estimates, the world's known oil reserves (excluding Shell oil) will be depleted within the next 50 years. Thus, the international community's focus on reducing carbon emissions and the targeted year of 2050 for achieving net-zero carbon make logical sense. As a result, it is inevitable that oil-exporting developing countries will need to shift toward carbon reduction. By the time global oil reserves are exhausted, nearly a third of the sources of greenhouse gas emissions will be eliminated. However,

* Associate Prof., International and Environmental Law, Law Faculty, Shahid Beheshti University; mo_abdollahi@sbu.ac.ir



This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>); which permits unrestricted reuse, distribution, and reproduction in any medium, provided the original work is properly cited.

OPEC member states must create policies and strategies to facilitate this transition without completely cutting off their oil revenues or denying global access to fossil energy. A rapid decline in the demand for oil would not only inflict serious economic damage on these countries but also reduce energy supplies for millions of people. Currently, nearly one billion individuals throughout the world lack access to essential energy sources, particularly electricity.

On one hand, the demand for energy does not seem to be decreasing, attributed to accelerated development, a growing global population, and the disparity between developed and developing countries. On the other hand, renewable energy has the potential to help fulfill the right to energy, one of the sustainable development goals (SDGs). Therefore, a “just and equitable transition” from carbon-based economies to a low-carbon economy is imperative. This approach must be promoted by developed countries, as it is now a pressing issue for developing nations, particularly OPEC oil countries.

The experience with international treaties aimed at reducing or eliminating ozone-depleting substances, like CFCs, illustrates that global environmental conventions have an objective nature; their requirements apply even to non-member states. For instance, a ban on trading ozone-depleting substances among member states effectively restricts non-member states' ability to buy and sell these materials. A similar situation exists with the climate commitments established by the Paris Agreement, with 195 out of 198 United Nations member states now parties to this agreement. As the ambitious goals of this agreement are realized, legal buyers of oil and other fossil fuels may also vanish.

Thus, the solution is not in costly isolation stemming from non-membership or lack of participation, but rather in active engagement in this international regime. This will better equip countries to transition to a Low-Carbon Economy or Circular Carbon Economy while positively influencing international policies to protect the interests of oil-producing nations.

The experiences from the 28th and 29th COP of the UNFCCC in Dubai and Baku, respectively, demonstrate that OPEC member states can, through international cooperation, prevent decisions that harm their fundamental interests (such as phasing out fossil fuels) or negotiate transitions from non-renewable to renewable energy in a fair and equitable manner.

Keywords

OPEC, climate change, the Paris Agreement, carbon emissions reduction, net-zero carbon, carbon neutrality, NDC.

References:

- Articles

1. Abdollahi, Mohsen and Faryadi, Masoud “Convergence of Iran’s Actions with the Reduction and Mitigation Obligations of the Paris Agreement”, [Translated] *International Law Review*, 41, 75, (2024).

2. Abdollahi, Mohsen and Moarefi, Saeede, “Common but differentiated responsibility principle in environmental law International”, [Translated] *Public Law Research*, 12, 29, (2010).
3. Hovi, Jon, Sprinz, Detlef F., & Bang, Guri, “Why the United States did not become a party to the Kyoto Protocol: German, Norwegian, and US perspectives”, *European Journal of International Relations*, 18, no. 1, (2012).
4. Rosen, Amanda, “The wrong solution at the right Time: the failure of the Kyoto protocol on climate change”, *Politics & Policy*, 43, no. 1, (2015).
5. Mason, Michael, “Theorising the climate change accountability of Persian Gulf petrostates”, *Wily Environmental Policy and Governance*, 33, no. 6, (2023).
6. Mianabadi, Hojjat; Amini, Azam; Daryadel, Ehsan, “Nationally Determined Contributions under Paris Agreement From Theory to Practice”, [Translated] *Journal of Strategic Studies on Public Policy*, 8, 28, (2018).
7. Nada Maamoun, “The Kyoto protocol: Empirical evidence of a hidden success”, *Journal of Environmental Economics and Management*, 95, (May 2019).
8. Nameless, “How the Circular Economy Works, Advantages and Disadvantages”, [Translated] *Organization for the Development of International Scientific and Technological Cooperation*, (2021), at: <https://cistc.ir/2729/>
9. Piri, Mahdi, “A Comment on the Legal Consequences of Ratification of the Paris Agreement on Climate Change by the I.R. Iran”, [Translated] *The Public Law Studies Quarterly*, 48, 4, (2019).

- Documents

1. CCE Guide Overview: A Guide to the Circular Carbon Economy (CCE) (King Abdullah Petroleum Studies and Research Center, August 2020), available at: <https://www.cceguide.org/guide/>
2. Conference of the Parties serving as the meeting of the Parties to the Paris Agreement, Fifth session, United Arab Emirates, 30 November to 12 December 2023, FCCC/PA/CMA/2023/L.17, (13 December 2023), at: https://unfccc.int/sites/default/files/resource/cma2023_L17E.pdf
3. Department of Environment IR. Iran Intended Nationally Determined Contribution (November 2015), at: <https://www4.unfccc.int/sites/submissions/INDC/Published%20Documents/Iran/1/INDC%20Iran%20Final%20Text.pdf>
4. Department of Environment Islamic Republic of Iran Intended Nationally Determined Contribution, (19 November 2015), at: <https://www4.unfccc.int/sites/submissions/INDC/Published%20Documents/Iran/1/INDC%20Iran%20Final%20Text.pdf>

5. European Parliament Resolution of 21 November 2023 on the UN Climate Change Conference 2023 in Dubai, United Arab Emirates (COP28) (2023/2636(RSP)), *European Parliament*, (2023) at: https://www.europarl.europa.eu/doceo/document/TA-9-2023-0407_EN.pdf
6. INDCs as communicated by Parties, at: <https://www4.unfccc.int/sites/submissions/indc/Submission%20Pages/submissions.aspx>
7. Kyoto Protocol to The United Nations Framework Convention on Climate Change (adopted 11 December 1997, entered into force 16 February 2005).
8. Law on the accession of the Islamic Republic of Iran to the Kyoto Protocol on the United Nations Framework Convention on Climate Change, [Translated] (31 May 2005), at: <https://rc.majlis.ir/fa/law/show/97764#:~:text>
9. Law on the accession of the Islamic Republic of Iran to the United Nations Framework Convention on Climate Change, [Translated] (24 August 1996), at: <https://rc.majlis.ir/fa/law/show/92687>
10. Nationally Determined Contributions State of Kuwait – (October 2021 updating the first NDC), at: <https://unfccc.int/sites/default/files/NDC/2022-06/Kuwait%20updating%20the%20first%20NDC-English.pdf>
11. Organization of the Petroleum Exporting Countries, *Statute*, 1961, as amended 2021, at: https://www.opec.org/opec_web/static_files_project/media/downloads/publications/OPEC_Statute.pdf
12. République Gabonaise Conseil National Climate, Second Contribution Déterminée Au Niveau National (2nde Cdn) (2020–2025), at: https://unfccc.int/sites/default/files/NDC/2022-07/20220706_Gabon_Updated%20NDC.pdf
13. Request for an Advisory Opinion of ICJ by Un General Assembly Resolution 77/276 (77th session), 29 march 2023, Concerning obligations of states in respect of climate change, *Written statement of the Organization of the Petroleum Exporting Countries* (OPEC) (19 march 2024).
14. The Intended Nationally Determined Contribution of the Kingdom of Saudi Arabia under the UNFCCC, Riyadh (November 2015),
15. The People’s Democratic Republic of Algeria Intended Nationally Determined Contribution INDC-Algeria, (September 3rd, 2015), at: <https://unfccc.int/sites/default/files/NDC/2022-06/Algeria%20-%20INDC%20%28English%20unofficial%20translation%29%20September%2003%2C2015.pdf>
16. The United Arab Emirates’ Third Nationally Determined Contribution (NDC 3.0) Accelerating Action Towards Mission 1.5C, (November 2024), at: <https://unfccc.int/sites/default/files/2024-11/UAE-NDC3.0.pdf>
17. The White House, Foreign Policy, “President Donald J. Trump is Ending United States Participation in an Unacceptable Iran Deal,” (May 8, 2018).

18. UN Climate Action: *For a livable climate: Net-zero commitments must be backed by credible action*, at: <https://www.un.org/en/climatechange/net-zero-coalition>
19. UNFCCC, 18th COP, 1/CMP.8, The Doha Amendment, (8 December 2012), at: https://unfccc.int/sites/default/files/resource/Agreement%20Notification_EU%20Joint%20fulfilment_E_.pdf
20. United Nations Framework Convention for Climate Change: UNFCCC, (adopted 9 May 1992, entered into force 21 March 1994) at: <https://unfccc.int/resource/docs/convkp/conveng.pdf>.
21. Updated First Nationally Determined Contribution, 2021 Submission To UNFCCC, Kingdom of Saudi Arabia, (2021), at: <https://unfccc.int/sites/default/files/resource/202203111154---KSA%20NDC%202021.pdf>
22. What's the difference between absolute emissions and emissions intensity? *Climate Council*, (August 4, 2015), at: <https://www.climatecouncil.org.au/what-is-the-difference-between-absolute-emissions-and-emissions-intensity/>
23. World Oil Outlook 2040, *Organization of the Petroleum Exporting Countries*, (2019), at: https://www.opec.org/opec_web/static_files_project/media/downloads/publications/WOO_2019.pdf

- Reports

1. Fetting, Constanze, "The European Green Deal", ESDN Report, ESDN Office, Vienna (December 2020), at: https://www.esdn.eu/fileadmin/ESDN_Reports/ESDN_Report_2_2020.pdf
2. Marcia Rocha, Mario Krapp, Johannes Guetschow, Louise Jeffery, Bill Hare, Michiel Schaeffer, *Historical Responsibility for Climate Change – from countries emissions to contribution to temperature increase*, *Climate Analytics & Potsdam Institute for Climate Impact Research*, (November 2015): 3, at: https://cal-clm.edcdn.com/assets/historical_responsibility_report_nov_2015.pdf
3. Global Launch: Tracking SDG7: The Energy Progress Report, (7 June 2021), at: <https://www.who.int/news/item/07-06-2021-global-launch-tracking-sdg7-the-energy-progress-report#:~:text=Despite%20accelerated%20progress%20in%20recent,pandemic%20seriously%20disrupts%20electrification%20efforts.>
4. *The Second Biennial Update Report (BUR 2)*, Kingdom of Saudi Arabia, Submitted to The UNFCCC, (March 2024), at: <https://unfccc.int/sites/default/files/resource/Kingdom%20of%20Saudi%20Arabia%C2%A0BUR2.pdf>
5. UNFCCC, Conference of the Parties Report of the Conference of the Parties on its twentieth session, held in Lima from 1 to 14 December 2014, FCCC/CP/2014/10/Add.1, decision 1/CP.20, (2 February 2015), "Lima Call for Climate Action", Para. 9, at: <https://unfccc.int/resource/docs/2014/cop20/eng/10a01.pdf#page=2%22>

6. Universal Access to Sustainable Energy Will Remain Elusive Without Addressing Inequalities, UN Press Release Report, (June 7, 2021), at: <https://www.un.org/sustainabledevelopment/blog/2021/06/report-universal-access-to-sustainable-energy-will-remain-elusive-without-addressing-inequalities/>

- Websites

1. Client Earth, “Fossil fuels and climate change: The facts”, *ClientEarth Communications*, 18 February 2025, at: <https://www.clientearth.org/latest/news/fossil-fuels-and-climate-change-the-facts/>
2. Francesco Bassetti, “Success or failure? The Kyoto Protocol’s troubled legacy”, *Foresight: The CMCC Observatory on Climate Policies and Futures*, (8 December 2022), at: <https://www.climateforesight.eu/articles/success-or-failure-the-kyoto-protocols-troubled-legacy>
3. Ritchie, Hannah, (2025), “CO₂ and Greenhouse Gas Emissions” *Published online at OurWorldinData.org*. Retrieved from: '<https://ourworldindata.org/profile/co2/united-states>'
4. Le Quére, C. *et al.*, “The global carbon budget 1959–2011”, *Earth System Science Data Discussions* 5, 2, (2012). at: <https://whatsyourimpact.org/greenhouse-gases/carbon-dioxide-emissions>
5. Maryam. Qarehgozlou, “Is Iran Pulling Out of Paris Agreement?” (20 May 2018), at: www.tehrantimes.com/news/423741/Is-Iran-pulling-out-of-Paris-Agreement
6. Main sources of carbon dioxide emissions, at: <https://whatsyourimpact.org/greenhouse-gases/carbon-dioxide-emissions>
7. Valerie Volcovici and Alison Withers, “OPEC Secretary General tells COP29 oil is a gift from God”, *Reuters*, (November 20, 2024), at: <https://www.reuters.com/business/energy/opec-secretary-general-tells-cop29-oil-is-gift-god-2024-11-20/>
8. GECF and OPEC Strengthen Collaboration on Climate and Energy Issues at COP29 in Baku, Baku, Azerbaijan, (19 Nov 2024), at: https://www.opec.org/opec_web/en/press_room/7414.htm
9. COP29-OPEC High-Level Energy Dialogue, *OPEC Press Release*, (22 May 2024), at: https://www.opec.org/opec_web/en/press_room/7335.htm
10. COP 28: What Was Achieved and What Happens Next? Key highlights from COP 28, 30 Nov. to 13 Dec. 2023, (last seen: 28 Jan. 2025) at: <https://unfccc.int/cop28/5-key-takeaways#end-of-fossil-fuels>
11. National Grid, “Carbon neutral vs net zero – understanding the difference”, at: <https://www.nationalgrid.com/stories/energy-explained/carbon-neutral-vs-net-zero-understanding-difference>
12. Oil & Gas: Petrostates set to lose \$8 trillion on demand-hit to oil and gas revenues, *Carbon Tracker*, (1 December 2023), at: <https://carbontracker.org/petrostates-set-to-lose-8-trillion-on-demand-hit-to-oil-and-gas-revenues/>