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## Climate Ambition and Sustainability Action

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Discussion Paper

# Stemming the Rising Tide Oceans and the United Nations Framework Convention on Climate Change

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### **Key Messages >>>**

- Oceans, the largest known carbon sink in the world, have largely remained absent from climate change negotiations under the United Nations Framework Convention on Climate Change (UNFCCC) and has had to compete for attention amidst a host of other issues despite their critical importance for the mitigation and adaptation outcomes.
- The absence of any institutional mechanisms addressing oceans within the UNFCCC can be explained by issues of “path dependence” and “institutional ambiguity” that impact institutional structure and stakeholder preferences as well as climate policymaking.
- The transition from the ‘Kyoto Protocol’ based top-down architecture to the hybrid governance model in the Paris Agreement has transformed the approach to tackling this topic. In the post-Paris climate architecture, with the publication of the “IPCC Special Report on the Ocean and Cryosphere in a Changing Climate”, there has been a surge of interest in negotiations to bring oceans to the forefront of UNFCCC deliberations.
- The establishment of the “Platform for Science-Based Ocean Solutions” (PSBOS) and the UN “Decade of Ocean Science for Sustainable Development” provides a timely opportunity to create greater synergies between different stakeholders, and diverse targets such as “Nationally Determined Contributions”, the “Aichi Biodiversity Targets”, and the “Sustainable Development Goals”.

## Introduction

The crisis of anthropogenic climate change has been framed in myriad ways, often oscillating between a wide array of definitions, political ideologies, economic pathways, and moral principles. Translating such a diverse and polarised debate into actionable policy has been at the core of all environmental negotiations, in particular the United Nations Framework Convention on Climate Change (UNFCCC), which acts as the main fulcrum for the transnational governance of climate change.<sup>1</sup> However, the UNFCCC negotiations remain shrouded in a sort of “*constructive ambiguity*”<sup>2</sup>, which allows for differences to perpetuate and solidify over time, so much so that an ambiguous outcome is considered preferable over non-compliance by member countries. Summing up the 2015 Paris Agreement, a much-lauded yet legally non-binding instrument, George Monbiot (2015) wrote that, “*by comparison to what it could have been, it’s a miracle. By comparison to what it should have been, it’s a disaster*”.<sup>3</sup>

One of the key oversights of the three-decade long UNFCCC negotiations is the oceans. Despite their critical importance for the mitigation and adaptation outcomes, oceans have largely remained absent from the negotiating table. The word ‘ocean’ finds no mention in the Kyoto Protocol (1997) and a solitary nod in the preambular section of the Paris Agreement.<sup>4</sup> It may seem counter-intuitive, but apart from the 1992 foundational text of the UNFCCC (Article 4.1d), which promotes sustainable management, “*of sinks and reservoirs...including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems*”<sup>5</sup>, the largest known carbon sink in the world has had to compete for attention amidst a host of other issues such as finance, CBDR-RC, carbon markets, deforestation, etc. This indifference gets particularly stark when compared with the other major sinks like the forest systems, which have received significant attention and even led to a dedicated workstream, under the aegis of the UNFCCC, called “Reducing Emissions from Deforestation and Forest Degradation and the Role of Conservation, Sustainable Management of Forests and Enhancement of Forest Carbon Stocks in Developing Countries” (REDD+).<sup>6</sup>

Another example of this neglect can be seen in the allocation of the side events at the annual COP meetings, which constitute the core of the negotiations. At the critical Copenhagen COP meeting of 2009, only four such events focused on oceans as against the thirty-one that were devoted to forests. A similar story unfolded at the following meetings in Cancun COP16 (3/31) and Durban COP17 (4/28), where the foundations for the Paris Agreement were laid out.<sup>7</sup> Although oceans did feature prominently in the “Structured Expert Dialogue (2013-2015)”, in which several dialogues were focused on the exchange of views and scientific knowledge regarding long term global goals relevant to the oceans, oceans did not find equal currency at the Paris COP21 meeting in 2015.<sup>8</sup>

Fortunately, the post-Paris phase, which saw intense negotiations on the “Paris Rulebook” and the publication of the “IPCC Special Report on the Ocean and Cryosphere in a Changing Climate”, has witnessed a surge of interest in ocean-related issues, which indicates that the priorities are being redrawn within the UNFCCC. This article analyses the reasons underpinning the absence of oceans within the UNFCCC and recent developments that are seemingly reversing this trend.

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<sup>1</sup> Liliانا B Andonova, Michele M Betsill, and Harriet Bulkeley, “Transnational Climate Governance”, *Global Environmental Politics* 9, No 2 (2009): 52-73. [https://www.mitpressjournals.org/doi/abs/10.1162/glep.2009.9.2.52%40glep.2020.20.issue-20th\\_Anniversary](https://www.mitpressjournals.org/doi/abs/10.1162/glep.2009.9.2.52%40glep.2020.20.issue-20th_Anniversary)

<sup>2</sup> Susan Biniaz, “Comma but Differentiated Responsibilities: Punctuation and 30 other ways Negotiators have Resolved Issues in the International Climate Change Regime”, *Michigan Journal of Environmental and Administrative Law*, No 6 (2016): 37. <https://heinonline.org/HOL/LandingPage?handle=hein.journals/michjo6&div=6&id=&page=>

<sup>3</sup> George Monbiot, “Grand Promises of Paris Climate Deal Undermined by Squalid Retrenchments”, *The Guardian* 12 December, 2015 <https://www.theguardian.com/environment/georgemonbiot/2015/dec/12/paris-climate-deal-governments-fossil-fuels>

<sup>4</sup> Yassir A Eddebbar, Natalya D Gallo, and Lauren B Linsmayer, “The Oceans and the UN Framework Convention on Climate Change”, *Limnology and Oceanography Bulletin* 24, No 3 (2015): 69-72. <https://sioweb.ucsd.edu/centers/cmcb/wp-content/uploads/sites/39/2015/11/Eddebbar-et-al.-2015-The-Oceans-and-the-UNFCCC.pdf>

<sup>5</sup> United Nations Framework Convention on Climate Change, Rio de Janeiro, UNFCCC (1992), <http://unfccc.int/resource/docs/convkp/conveng.pdf>

<sup>6</sup> Tobias Dan Nielsen, “From REDD+ Forests to Green Landscapes? Analysing the Emerging Integrated Landscape Approach Discourse in the UNFCCC”, *Forest Policy and Economics* 73 (2016): 177-184. <https://www.sciencedirect.com/science/article/abs/pii/S1389934116302878>

<sup>7</sup> Grantly Galland, Ellycia Harroul-Kolieb, and Dorothée Herr, “The Ocean and Climate Change Policy”, *Climate Policy* 12, No 6 (2012): 764-771. <https://www.tandfonline.com/doi/abs/10.1080/14693062.2012.692207>

<sup>8</sup> “Report on The Structured Expert Dialogue on the 2013–2015 Review.” *United Nations Office at Geneva* (2015). <https://unfccc.int/resource/docs/2015/sb/eng/inf01.pdf>

## Dependencies and Pathways

The conspicuous absence of oceans within the UNFCCC negotiations can be explained by assessing the impact of path-dependence on the institutional structure, and stakeholder-preferences. “Path dependence” refers to a historical inertia wherein, “*early sequences of choices can set in motion a course of events that becomes self-reinforcing over time.*”<sup>9</sup>

Institutional path dependence creates a positive feedback mechanism, accumulated through years of experience, financial investments, along with a standardization and diffusion of values and technologies, all of which, taken in aggregate, makes it difficult to veer off towards new institutional paradigms, and transition pathways.

An example of path dependency in the context of the climate change is the well-known ‘carbon lock-in’, “*whereby initial conditions, increasing economic returns to scale, and social and individual dynamics act to inhibit innovation and competitiveness of low-carbon alternatives.*”<sup>10</sup> The path dependency within the UNFCCC explains the absence of any institutional mechanisms addressing oceans, even though insurmountable evidence of its linkage with climate change has only grown with time. Oceans are the largest CO<sub>2</sub> sink, having absorbed 40 per cent of CO<sub>2</sub> emissions since the industrial era and nearly 90 per cent since the 1970s, the period which has been described as the period of ‘Great Acceleration’.<sup>11</sup>

When read in the context of intergovernmental organisations, path-continuity becomes a political problem, as institutions are conceived as “*distributional instruments laden with power implications,*” which are not merely driven by fortuity and chance events in the early years, but also through the conscious reinforcement by powerful actors within such organisations.<sup>12</sup> Although policymakers and non-State stakeholders prefer stability and durability within climate policymaking process, the evidence on the ground suggests that the political process favours a balance between durability and flexibility. A good example of this balance is the Paris Agreement itself — a flexible instrument of climate change governance, which struck a compromise with its adoption of a hybrid approach, wherein an enhanced transparency framework was adopted to meet the 2° C temperature-target and non-State actors were brought on board as stakeholders so as to ratchet up the collective ambition, but, at the same time, States were provided with the flexibility to determine their commitments, “*in light of their different national circumstances.*”<sup>13</sup>

Yet another factor that has contributed towards this resistance to change is the institutional ambiguity that stems from the complicated legal status of the maritime sphere. States, as well as international organisations, have consistently struggled with employing legal-jurisdictional approaches to tackle the complex challenge of climate change in the maritime sphere.<sup>14</sup> While States remain the dominant actors, many key regional platforms and conventions have, indeed, become relevant over time. Examples include the 1982 United Nations Convention on the Law of the Sea (UNCLOS), which forms the regulatory framework for the usage of oceans, and the International Maritime Organization (IMO), a specialised agency of the UN, which deals with shipping. That said, the lack of rules to tackle the overlapping ‘institutional

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<sup>9</sup> Daniel Rosenbloom, James Meadowcroft, and Benjamin Cashore, “Stability and Climate Policy? Harnessing Insights on Path Dependence, Policy Feedback, and Transition Pathways”, *Energy Research & Social Science* No 50 (2019): 168-178. <https://www.sciencedirect.com/science/article/abs/pii/S2214629618302755>

<sup>10</sup> Karen C Seto et al, “Carbon Lock-in: Types, Causes, and Policy Implications”, *Annual Review of Environment and Resources* No 41 (2016), 426. <https://www.annualreviews.org/doi/full/10.1146/annurev-environ-110615-085934>

**See Also:**

Gregory C Unruh, “Understanding Carbon Lock-in”, *Energy Policy* 28, No 12 (2000): 817-830. <https://www.sciencedirect.com/science/article/abs/pii/S0301421500000707>

<sup>11</sup> Will Steffen et al, “The Trajectory of the Anthropocene: the Great Acceleration”, *The Anthropocene Review* 2, No 1 (2015): 81-98. <https://journals.sagepub.com/doi/abs/10.1177/2053019614564785>

**See Also:**

Christine Dell’Amore, “The Oceans Can’t Protect Us Anymore—Here’s Why”, *National geographic*, September, 2016. <https://www.nationalgeographic.com/news/2016/09/oceans-warming-global-environment-climate/>

<sup>12</sup> James Mahoney and Kathleen Thelen, “A Theory of Gradual Institutional Change”, in *Explaining Institutional Change: Ambiguity, Agency, and Power*, eds. James Mahoney and Kathleen Thelen, (Cambridge University Press, 2010): 1-37, <https://www.cambridge.org/core/books/explaining-institutional-change/theory-of-gradual-institutional-change/3197D231F22005DBE6463E056A44BF49>

<sup>13</sup> “Adoption of the Paris Agreement”, FCCC/CP/2015/L.9/Rev.1 (UNFCCC, 2015). <http://unfccc.int/resource/docs/2015/cop21/eng/109r01.pdf>

<sup>14</sup> JP van Tatenhove, “The Environmental State at Sea”, *Environmental Politics* 25, No 1 (2016): 160-179. <https://rsa.tandfonline.com/doi/abs/10.1080/09644016.2015.1074386>

settings’ of these organizations has created an opportunity for the dominant actors to shape the norms and negotiate and alter the existing rules-based order.<sup>15</sup> Much like path-dependency, “institutional ambiguity” also resists change as it provides an asymmetric opportunity for powerful actors to exercise influence.

The critical take away from all this is the immense weight that choices that are made in the here-and-now have in shaping the future of climate policy. The overriding imperative of anthropogenic climate change and the availability of credible scientific evidence has created a space in which to grapple with the issue of path dependency in the context of climate policymaking. A key example of this change is the Representative Concentration Pathways (RCPs), which were used in the 2014 IPCC Fifth Assessment Report (AR5). RCPs are a set of transition scenarios that assess the concentration trajectory of Greenhouse Gases (GHG) in the atmosphere, over time. The IPCC reports use four different pathways — RCP 2.6, RCP 4.5, RCP 6, and RCP 8.5. While RCP 2.6 is the most ambitious and stringent of the pathways, RCP 8.5 lies at the other end of the spectrum and represents a ‘business as usual’ (BAU) scenario of continuous rise in emissions through the 21st century.<sup>16</sup>

The IPCC “Special Report on the Ocean and Cryosphere in a Changing Climate” (SROCC) notes,

*“It is virtually certain that the global ocean has warmed unabated since 1970 and has taken up more than 90% of the excess heat in the climate system (high confidence) ... sea level rise has accelerated (extremely likely) due to the combined increased ice loss from the Greenland and Antarctic ice sheets (very high confidence). Mass loss from the Antarctic ice sheet over the period 2007-2016 tripled relative to 1997-2006.”<sup>17</sup>*

**Table 1: Projected global mean surface temperature changes relative to 1850–1900 for two time periods under four RCPs**

| Scenario | Near-term: 2031–2050 |                   | End-of-century: 2081–2100 |                   |
|----------|----------------------|-------------------|---------------------------|-------------------|
|          | Mean (°C)            | Likely range (°C) | Mean (°C)                 | Likely range (°C) |
| RCP2.6   | 1.6                  | 1.1 to 2.0        | 1.6                       | 0.9 to 2.4        |
| RCP 4.5  | 1.7                  | 1.3 to 2.2        | 2.5                       | 1.7 to 3.3        |
| RCP 6.0  | 1.6                  | 1.2 to 2.0        | 2.9                       | 2.0 to 3.8        |
| RCP 8.5  | 2.0                  | 1.5 to 2.4        | 4.3                       | 3.2 to 5.4        |

Source: IPCC, “Summary for Policymakers” in IPCC Special Report on the Ocean and Cryosphere in a Changing Climate, eds. HO Pörtner, DC Roberts, V Masson-Delmotte, P Zhai, M Tignor, E Poloczanska, K Mintenbeck, A Alegría, M Nicolai, A Okem, J Petzold, B Rama, NM Weyer (In press, 2019)

The report makes a number of grim observations and provides critical evidence that can nevertheless prove beneficial in limiting the global temperatures to “well below” the 2° Celsius point, in line with the Paris Agreement. Recognizing that the health of the oceans is directly linked with food security, water security, marine ecosystems, tourism, transport, livelihoods, health, culture and identity, and so on, the SROCC report projects four separate scenarios or pathways, which open a window into the imminent future and how it will be impacted by choices made in the present (**Table 1**).

### Post-Paris Climate Architecture: Rising Profile of Oceans

The publication of the Special Report on the Ocean and Cryosphere in a Changing Climate has provided a major fillip to the campaign to bring oceans to the front and centre of UNFCCC attention in the post-Paris phase of negotiations. Article 4.1 (d) of the Paris Agreement acknowledged the critical importance of carbon sinks, as witness its Preamble, which noted, “it is important to ensure the integrity of all ecosystems,

<sup>15</sup> Judith Van Leeuwen, Luc Van Hoof, and Jan Van Tatenhove, “Institutional Ambiguity in Implementing the European Union Marine Strategy Framework Directive”, *Marine Policy* 36, No 3 (2012): 636-643. <https://www.sciencedirect.com/science/article/abs/pii/S0308597X11001576>

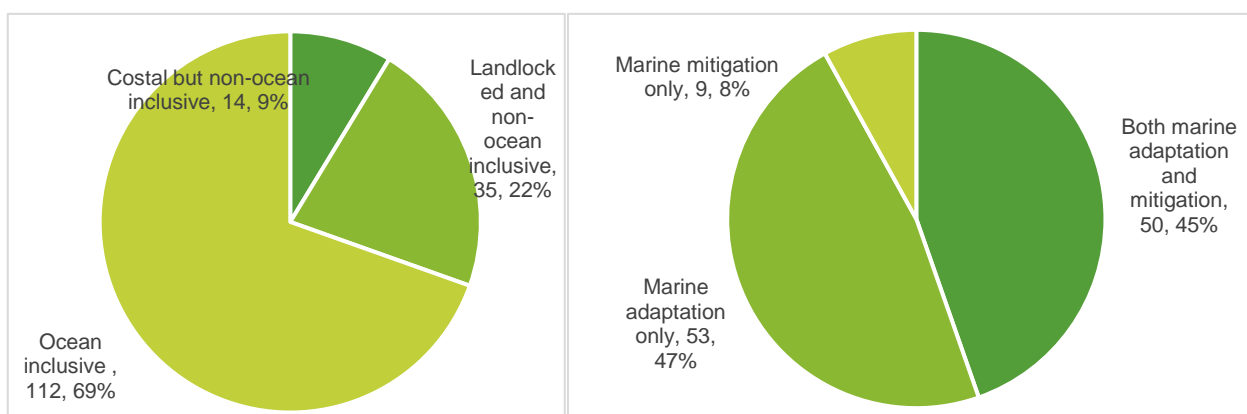
<sup>16</sup> “Summary for Policymakers” in IPCC Special Report on the Ocean and Cryosphere in a Changing Climate, eds. HO Pörtner et al. (in press, 2019) <https://www.ipcc.ch/srocc/chapter/summary-for-policymakers/>

<sup>17</sup> *Ibid*, 9-10.



including oceans.”<sup>18</sup> Although there is still no dedicated working group within the UNFCCC that deals exclusively with the ocean, the transition from the ‘Kyoto Protocol’-based top-down architecture to the hybrid governance model in the Paris Agreement has wrought a sea of change in the approach to tackling this topic.<sup>19</sup>

One of the visible efforts in this direction has been the inclusion of an ocean-climate change linkage under the “Nairobi Work Programme” (NWP), which acts as the ‘knowledge-to-action hub’ of the Convention. Established in 2005, the NWP works towards a synthesis of information on different facets of climate impact and vulnerability, and further dissemination of such findings, so as to address present knowledge-gaps and help parties to convert their commitments into tangible action on the ground.<sup>20</sup> The 13<sup>th</sup> “Focal Point Forum” of the NWP was held in Madrid, on 06 December, 2019, in line with the outcomes of the 50<sup>th</sup> meeting of “Subsidiary Body for Scientific and Technological Advice” (SBSTA),<sup>21</sup> and focused exclusively on the, “oceans, coastal areas and ecosystems, including mega deltas, coral reefs and mangroves.”<sup>22</sup> **The forum discussed a Scoping Paper** entitled, “Adaptation of the Ocean, Coastal Areas and Ecosystems”, which noted that 112 countries, representing 73 per cent of the world’s population, included goals related to oceans in their commitments that were submitted to the UNFCCC. The paper further noted that, “Over 70% of current Nationally Determined Contributions (NDCs) mention ocean-related topics with the dominant issues being: coastal impacts, ocean warming impacts, fisheries impact, ocean research and marine ecosystem impacts”<sup>23</sup> (Figure 1).



**Figure 1: Inclusion of Ocean Issues in NDCs**

Source: Based on Natalya D Gallo, David G Victor, and Lisa A Levin, “Ocean commitments under the Paris Agreement”, *Nature Climate Change* 7, no. 11 (2017): 834

Yet another promising development was the designation of the COP25 meeting in 2019 as the “Blue COP”, which formed part of the effort to elevate the status of the ocean within the UNFCCC.<sup>24</sup> Unlike the previous and undoubtedly dismal record, the COP25 meeting saw at least 87 events related to the ocean, and

<sup>18</sup> “Adoption of the Paris Agreement”, FCCC/CP/2015/L.9/Rev.1 (2015). <http://unfccc.int/resource/docs/2015/cop21/eng/109r01.pdf>

<sup>19</sup> Jonathan W Kuyper, Björn-Ola Linnér, and Heike Schroeder, “Non-State Actors in Hybrid Global Climate Governance: Justice, Legitimacy, and Effectiveness in a post-Paris Era”, *Wiley Interdisciplinary Reviews: Climate Change* 9, No 1 (2018): e497. <https://onlinelibrary.wiley.com/doi/full/10.1002/wcc.497>

<sup>20</sup> See <https://spark.adobe.com/page/TpuJ4xeNwFEeY/>

<sup>21</sup> UNFCCC, “Nairobi Work Programme on Impacts, Vulnerability and Adaptation to Climate Change” (FCCC/SBSTA/2019/paragraph 17), 24 June 2019, [https://unfccc.int/sites/default/files/resource/SBSTA2019\\_L02E.pdf](https://unfccc.int/sites/default/files/resource/SBSTA2019_L02E.pdf)

<sup>22</sup> UNFCCC, “Oceans, Coastal Areas and Ecosystems: Engagement Opportunities and Resources under the Nairobi Work Programme”, <https://www4.unfccc.int/sites/NWPStaging/Pages/oceans-page.aspx>

<sup>23</sup> “Adaptation of the Ocean, Coastal Areas and Ecosystems: Scoping Paper on Closing Knowledge Gaps and Advancing Action”, Nairobi Work Programme, (2019) [https://unfccc.int/sites/default/files/resource/Scopingpaper\\_Final%20version\\_300620.pdf](https://unfccc.int/sites/default/files/resource/Scopingpaper_Final%20version_300620.pdf)

**See Also:**

Natalya D Gallo, David G Victor, and Lisa A Levin, “Ocean commitments under the Paris Agreement”, *Nature Climate Change* 7, No 11 (2017): 833-838. <https://escholarship.org/content/qt5255342w/qt5255342w.pdf>

<sup>24</sup> Shana Rappaport, “COP25: Diving into the first Blue COP”, *GreenBiz*, 05 December (2019) <https://www.greenbiz.com/article/cop25-diving-first-blue-cop>

witnessed a far wider participation by organizations working on the issues specific to the ocean.<sup>25</sup> The “Blue COP” led to the establishment of the “Platform for Science-Based Ocean Solutions” (PSBOS) with an objective, “to encourage the incorporation of the ocean in climate strategies (NDCs, NAPs, Adaptation Communications, and National Policy Frameworks)”<sup>26</sup>

The “Ocean Conference”, held in 2017, was the first such dedicated effort by the United Nations to address the question of oceans and mobilize action towards the achievement of the SDG 14: Life Below Water, which is a critical part of the Agenda 2030. The UN “Decade of Ocean Science for Sustainable Development”, that extends from 2021 to 2030, provides yet another timely opportunity to create greater synergies between different stakeholders, and diverse targets such as “Nationally Determined Commitments”, the “Aichi Biodiversity Targets”, and the “Sustainable Development Goals”. The ascendancy of ocean-related issues amidst pervasive changes brought about by anthropogenic climate change is a step in the right direction, which will, if persisted with, ensure a much-needed enhancement of attention being paid on maritime concerns and opportunities.

### About the Author

Dr Saurabh Thakur is an Associate Fellow at the National Maritime Foundation. His current research focusses upon the multifarious manifestations of India’s transition from a “Brown” to a “Blue” Economy, and the implications and impacts thereof within the Indo-Pacific. He may be contacted at [becc1.nmf@gmail.com](mailto:becc1.nmf@gmail.com)

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<sup>25</sup>“Let Us Remember this as a Blue COP”, World Meteorological Organisation, 12 December (2019) <https://public.wmo.int/en/media/news/%E2%80%9Clet-us-remember-blue-cop%E2%80%9D>

<sup>26</sup> Platform of Science-based Ocean Solutions, UNFCCC, 3<sup>rd</sup> December (2019) [https://unfccc.int/sites/default/files/resource/Presidency\\_event\\_PSBOS\\_3Dec.pdf](https://unfccc.int/sites/default/files/resource/Presidency_event_PSBOS_3Dec.pdf)

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### **About POP Movement**

Protect our Planet (POP) Movement believes that the impacts of climate change will not affect a single country but the planet, in its entirety. POP has confidence that the power of the youth of the world will unite to address this challenge. POP believes that the time to act is now and that knowledge is the true currency of changing the future.

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The National Maritime Foundation, in New Delhi, India is a non-governmental, non-political maritime think-tank, which aims to undertake studies and analyses on various issues of concern in the maritime domain with a view to formulate and present options for a vibrant and evolving national maritime policy.



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