

理事長開講：談國際海事組織策略規劃的演進歷程與 2024-2029 策略規劃

陳彥宏*

自 1948 年成立以來，國際海事組織(IMO)作為聯合國負責全球航運安全、保安及防止船舶造成海洋污染的專門機構，其策略規劃(Strategic Plan 或稱「戰略計畫」)框架經歷了從單純的技術標準制定到全球航運治理藍圖的深刻演變。隨著全球化進程、技術變革、氣候危機以及地緣政治風險的交織，IMO 的策略規劃已成為引領全球航運業向可持續、數位化和具備韌性轉型的重要工具。

2025.11 應海洋委員會海洋保育署之請託代為編寫「國際海事組織簡明參考手冊」，文中對國際海事組織的策略規劃亦略有著墨，比較可惜的是，撰寫期間，IMO 第 34 次大會通過的 A.1196(34)號決議(Revised Strategic Plan for the Organization (For the Six-Year Period 2024-2029))尚未正式公告，因此在該「手冊」仍以 2023.12.06 IMO 第 33 屆大會正式通過的第 A.1173(33)號決議的 2024-2029 年策略規劃為基調。另因配合海洋保育署的任務需求，「手冊」中對於 IMO 的策略規劃「僅」描述與海洋環境相關之議題。

適逢 A.1196(34)號決議的正式公告，作為「手冊」的完整補充，本文將 IMO 策略規劃(戰略計畫)的演進歷程與各項議題一次性完整的敘明清楚，以供海洋保育署及有興趣的人們參考。

國際海事組織策略規劃的歷史演進歷程

IMO 的策略規劃體系並非一成不變，而是隨著國際海事環境的變遷而不斷自我修正與升級。其演進過程可大致分為奠基、優化、目標導向與全面策略化四個階段。

組織成立與初期技術規章建立(1948–1981)

* 陳彥宏 Solomon CHEN，英國威爾斯大學海洋事務與國際運輸學博士，台灣海事安全與保安研究會理事長，新台灣國策智庫諮詢委員，國家運輸安全調查委員會諮詢委員，海洋委員會海巡艦隊分署海損評議審查會委員，海事仲裁人。曾任教於臺灣海洋大學、澳大利亞海事學院國家港埠與航運中心、高雄海洋科技大學。曾客座於上海交通大學凱原法學院國際海事研究中心、廈門大學南海研究、澳大利亞海運學院。EMAIL: solomonyhchen@gmail.com。

1948 年在日內瓦召開的國際會議通過了《國際海事組織公約》，正式設立了原名為「海事協商組織(IMCO)」的機構，該公約於 1958 年生效，組織於 1959 年首次開會。早期的重點主要集中在海事安全的國際標準化。由於當時傳統海事國家傾向於限制該組織的權力，以避免對其海事利益的干擾，IMO 初期的職能主要在於技術諮詢與公約制定。

1960 年通過的新版《國際海事安全公約》(SOLAS)是組織成立後的首個重大任務，隨後其重點擴展至便利化國際海事交通、載重線以及危險品運輸等技術領域。1967 年 Torrey Canyon 油輪災難發生後，海洋污染防治成為組織的另一核心職責，直接推動了 1973 年《國際防止船舶造成污染公約》(MARPOL)的制定。在此階段，策略規劃主要體現在對特定技術公約的修訂與維護。

從「立法」轉向「實施」(1981–1990 年代)

1981.11.20 年通過的第 A.500(XII)號決議(Objectives of the Organisation in the 1980s)標誌著 IMO 工作重點的重大轉移。該決議明確提出，組織應在制定新公約與修訂現有公約方面「顯著放慢速度」，轉而讓海事行政部門與航運業有時間「趕上」並落實已有的技術標準。這一轉變反映了國際社會對法律實施效能的關注，奠定了未來策略規劃中「能力建設(Capacity Building)」的基礎。在 A.500(XII)號決議中首次要求委員會工作需由理事會統籌協調，避免安全、污染、防護等議題「各做各的」。在這個階段，IMO 仍是「條約制定者」，但開始意識到沒有整體方向，就會碎片化失效，基本上 A.500(XII)號決議是策略意識的萌芽，但尚未制度化。

1990 年代，IMO 進一步深化了對實施效率的追蹤。1997.11.27 通過的第 A.847(20)號決議(Guidelines to Assist Flag States in the Implementation of IMO Instruments)為旗國提供了實施 IMO 文書的指南，強調了行政、技術與社會監督能力對確保船舶安全與環保的重要性。此時，組織開始意識到，僅有高品質的國際法律是不夠的，必須有一套全球統一的實施與監督體系。

目標管理與現代策略框架的萌芽(2000–2017)

進入 21 世紀，IMO 引入了更為系統化的目標管理(Management by Objectives)。1999.11.16 第 A.900(21)號決議(Objectives of the Organisation in the 2000s)對外宣示 IMO 進入「新世紀」，對內確認安全、環境、效率、人員能力都是長期核心目標。2002.01.25 第 A.909(22)號決議(Policy Making in IMO - Setting the Organization's Policies and

Objectives)確立「政策如何形成」的程序正義，明確定義由理事會主導「整體方向」，會員國可主動提交政策文件，秘書長與產業意見可納入，但非主導。這二個決議案，標誌著現代策略規劃雛形的確立。

2004.03.18 第 23 屆大會 A.944(23)號決議(Strategic Plan for the Organization (For the Six-Year Period 2004-2010))首次推出策略規劃，策略規劃(Strategic Plan)這一詞也算首次正式現身。在這個決議中確認 Strategic Plan 必須是「滾動式(rolling)」的，而且是要能因外部環境變化而調整的，也明確定義理事會明對於的策略治理的責任。換個角度來解釋，A.909(22)號決議是「政策形成程序」，A.944(23)號決議是「把程序轉為制度化運作要求」。

2005.11.23 第 24 屆大會 A.970(24)號決議(Strategic Plan for the Organization (For the Six-Year Period 2006-2011))首次採用「六年制 Strategic Plan」結構化為使命(Mission)、趨勢與挑戰(Trends & Challenges)、策略方向(Strategic Directions)、績效指標(Performance Indicators)等四大模組。比較大的創新是引入船舶損失率、生命損失、污染量、技術合作交付，已經是一種 KPI 的雛形。

2006.05.04 技術委員會 56 次大會針對 A.970(24)號決議提出 TC 56/2/Add.1(Technical co-operation aspects of the Strategic Plan for the Organization (for the six-year period 2006 to 2011) and High Level Action Plan of the Organization and Priorities for the 2006-2007 Biennium)六年期策略規劃技術合作面向的高階行動計畫以及 2006-2007 雙年度優先事項意見。在 TC 56/2/Add.1 中：

- 明確界定「技術合作」在 Strategic Plan 中的策略位置，強調技術合作不再只是「支援活動」，而是 Strategic Plan 的必要實現手段，也是確保 IMO 規範「能被落地」的核心工具。
- 具體的列出哪些 Performance Indicators 與技術合作直接相關，包括 Indicator 1(締約國加入公約的比例)、Indicator 14(技術援助的交付與覆蓋)、Indicator 15(ITCP(整合技術合作計畫)的永續性)。
- 建立「Strategic Plan (為什麼做) ⇒ High-level Action Plan (要做什麼) ⇒ Biennial Outputs(兩年期產出實際交付什麼)」的垂直連結。這是後來 Results-based management(成果導向治理)的早期實作版本。

- 文件特別強調 Strategic Plan 每兩年要被檢視，技術合作成果要回饋到 Strategic Plan 評估，作為下一輪資源配置的依據。因此，如果說 A.970(24)讓 IMO「有了策略」，那麼 TC 56/2/Add.1 則是讓 IMO「開始用策略治理自己」。

2007.12.21 第 25 屆大會 A.989(25)號決議(Strategic Plan for the Organization (For the Six-Year Period 2008-2013))更新了策略規劃與高層行動計畫，首次將「應對全球變暖」與「實現千年發展目標(Millennium Development Goals, MDGs)」納入組織的宏觀挑戰。在 A.989(25)號決議中 KPI 正式成為「績效評估工具」，策略規劃與委員會工作計畫、高階行動計畫、文件格式、工作項目稽核全面連動。

2008.02.05 海事安全委員會 84 次大會針對 A.989(25)號決議提出 MSC 84/22/20 (Strategic Plan for the Organization (for the six-year period 2008-2013) and High-level Action Plan and related decisions by the twenty-fifth session of the Assembly and the twenty-fourth extraordinary session of the Council)高階行動計畫以及相關事項採取行動意見，是把 A.989(25)的 Strategic Plan 強制嵌入 MSC 日常運作與工作方法中的執行性文件，MSC 84/22/20 不是策略本體，而是策略治理的「操作指令書」。MSC 84/22/20 要求 MSC 在向 Council / Assembly 回報時不再只是「我們做了什麼」而是對應哪一個 Strategic Direction、完成了哪一個 High-level Action、交付了哪些 planned outputs。

2009.11.26 第 26 屆大會 A.1011(26)號決議(Strategic Plan for the Organization (For the Six-Year Period 2010-2015))意識到 Strategic Plan 已經有了，但各委員會「怎麼用」並不一致的問題。A.1011(26)號決議要求 Council、MSC、MEPC、TCC 等所有 IMO organs 在議程設定、工作項目提案、報告格式中，都必須「一致地」使用 Strategic Plan，且應該對應 Strategic Directions。基本上，A.1011(26)是 A.1174(33)(Application of the Strategic Plan)的最早的制度原型，是 IMO 第一次公開承認，問題不在於「有沒有策略」，而在於「策略是否被一致使用」。

2011.12.21 第 27 屆大會 A.1037(27)號決議(Strategic Plan for the Organization (For the Six-Year Period 2012-2017))的性質是對 Strategic Plan 2008 - 2013 中期檢視與制度微調，是一份「治理體檢報告型決議」。

2013.11.29 第 28 屆大會 A.1060(28)號決議(Strategic Plan for the Organization (For the Six-Year Period 2014-2019))深化策略規劃，引入人為因素(Human Factor)；海盜、保安；氣候與空氣污染，治理風格轉為「結果」導向、「風險」導向，IMO 不再只是「規則生產者」，而是「全球航運治理中樞」。

2015.10.01 理事會第 28 次特別會議 C/ES.28/3/2 提出(Strategy, Planning and Reform - Strategic Plan for the Organization for the six-year period 2016-2021)策略、規劃與改革的修正草案，將 2014-2019 策略規劃調正為 2016-2021。

2015 年聯合國通過 2030 可持續發展議程(SDGs)後，2015.12.01 IMO 第 29 屆大會 A.1097(29)號決議(Strategic Plan for the Organization (For the Six-Year Period 2016-2021)) SDGs 正式進場，開始將其策略與全球發展目標緊密對接。此外，A.1097(29)是在為「成果導向(results-based)」治理鋪路，強調輸出是否能被追蹤、是否能回饋到 KPI、是否能支持下一輪 Strategic Plan 的設計。具體而言，A.1097(29)是從 KPI「存在」，走向 KPI「真的被用來治理」的轉折點。

2017.12.06 第 30 屆大會通過了第 A.1110(30)號決議(Strategic Plan for the Organization (For the Six-Year Period 2018-2023))，確立了第一個正式的 2018-2023 年六年策略規劃，並首次引入了「願景聲明(Vision Statement)」。A.1110(30)號決議中，明確將 IMO 任務連結 UN 2030 Agenda，航運被視為發展工具而非單純技術產業。SDGs 正式進場。

2019 年年底的第 31 屆大會並未針對六年策略規劃有任何新決議，但在 2020.05.28 理事會第 32 次特別會議中西班牙正分提出 C/ES.32/4/13 (Proposals for the Facilitation of Shipping During the Covid-19 Pandemic - Proposed amendment to the Strategic Plan for the Organization 2018-2023)關於在新冠疫情期間便利航運的建議，文件提及目前情勢中人為因素的影響，並請理事會審議此事，以便制定 2018-2023 年組織策略規劃修正案提案，供大會第三十二屆會議批准。

2021.12.15 第 32 屆大會通過了第 A.1149(32)號決議(Revised Strategic Plan for the Organization (For the Six-Year Period 2018-2023))的修正策略規劃。A.1149(32)號決議新增 Vision Statement，強調 Capacity Building、技術合作與發展中國家，KPI 開始對齊 SDGs，IMO 成為 UN 體系中「可量化治理」的典型組織。

2024-2029 策略規劃深度分析

2023.12.06 IMO 第 33 屆大會正式通過了第 A.1173(33)號決議(Strategic Plan for the Organization (For the Six-Year Period 2024-2029))，批准了 2024 年至 2029 年的策略規劃。A.1173(33)號決議的 Strategic Directions 精煉為 SD1 - SD7 納入脫碳、數位化、韌性、人本治理。

這份規劃在 2025.12.03 第 34 屆大會上經由第 A.1196(34)號決議(Revised Strategic Plan for the Organization (For the Six-Year Period 2024-2029))進一步修訂，以對接 2026-2027 雙年度的工作計畫與預算安排。A.1196(34)號決議不是新 Strategic Plan，而是策略規劃(Strategic Plan)、兩年期產出目標(Biennial Outputs)、基於結果的預算(Results-based Budget)、秘書處業務計畫(Secretariat Business Plan)制度補完的關鍵拼圖。

任務聲明與核心願景的策略高度

在 2024-2029 策略規劃的任務聲明重申了 IMO 作為聯合國專門機構的定位，即透過合作促進安全、保安、環保、高效且可持續的航運。然而，其願景聲明展現了前所未有的主動性。

規劃明確指出，IMO 願景的核心在於「鞏固其作為全球航運監管機構的領導地位」，這意味著組織不僅是標準的守護者，更是行業變革的推動者。願景強調，IMO 將主動識別並分析技術發展、環境保護、氣候變遷以及海員福祉帶來的挑戰與機遇。這種從「被動反應」到「主動治理」的轉變，體現在其對新興議題(如自動化船舶、替代燃料與數位供應鏈)的快速反應上。

綜觀國際海事組織策略規劃體系的歷史演進，可以發現其核心關懷已逐步由「支援公約制定與生效」的輔助角色，轉向「支撐全球航運治理結果」的制度中樞。

早期策略文件著重於確保技術規範與法律文書的完整性，而近二十年來，策略規劃的重心則明顯移向實施能力、制度一致性、衡量工具與回饋機制的建立。這一轉變，並非否定公約的重要性，而是承認僅有規則本身，已不足以回應高度複雜且快速變動的海事風險環境。

因此，2024-2029 年策略規劃所呈現的八大策略方向、績效指標與具體工作輸出，應被理解為一套相互連結的治理架構，而非彼此獨立的政策清單；其目的，在於使國際航運安全、環境保護與人為因素得以在可評估、可修正的制度軌道上，持續推進。

八大策略方向(Strategic Directions)的內涵與演進

與 2018-2023 年的七項策略方向(Strategic Directions, SDs)相比，2024-2029 規劃擴展實務與政策討論中，普遍被理解為「7+1」的八大方向，這反映了組織對「人類要素」與「監管效能」的進一步細化與重視。雖然關於 Human Element/People at the centre 已

高度內嵌於 SD1、SD5、SD6，但在治理語言與政策實務上，被視為橫向貫穿的第八個核心策略主軸。

2018-2023 年	2024-2029 年
SD 1: Improve implementation 改善執行	SD 1: Ensure implementation of IMO instruments supported by capacity development 確保在能力建構的支持下落實國際海事組織各項文書
SD 2: Integrate new and advancing technologies in the regulatory framework 將新興科技、發展中科技納入監理框架	SD 2: Integrate new, emerging and advancing technologies in the regulatory framework 將新興科技、發展中科技與先進科技納入監理框架
SD 3: Respond to climate change 應對氣候變遷	SD 3: Respond to climate change and reduce greenhouse gas emissions from international shipping 因應氣候變遷，減少國際航運溫室氣體排放
SD 4: Engage in ocean governance 參與海洋治理	SD 4: Continue to engage in ocean governance 持續參與海洋治理
SD 5: Enhance global facilitation and security of international trade 加強全球便利化與國際貿易安全	SD 5: Enhance global facilitation, supply chain resilience and security of international trade 加強全球便利化、供應鏈韌性與國際貿易安全
SD 6: Address the human element 關注人為因素	SD 6: Address the human element 關注人為因素
SD 7: Ensure regulatory effectiveness 確保監管的有效性	SD 7: Ensure the regulatory effectiveness of international shipping 確保國際航運監管的有效性
n.a.	SD 8: Ensure organizational effectiveness 確保組織效能

SD 1：確保在能力建構的支援下落實 IMO 各項文書的實施(Ensure implementation of IMO instruments supported by capacity development)

早期 A.500 ⇒ A.909 重點在規則制定與協調，A.970、A.989 開始明確承認問題不在「有沒有規則」，而在「規則有沒有被做出來」。IMSAS 啟動後，IMO 正式掌握 implementation gap、enforcement gap、capacity gap，到 A.1196，「實施」被放在所有策略之首。SD1 代表 IMO 已完全從「規範生產者」轉型為「實施成效的守門人」。

這一策略方向的核心在於「公平競爭環境(Level Playing Field)」、在於促進 IMO 文書的生效與普遍接受、強化會員國對其 50 多項國際條約的普遍且一致的實施與執法。公約的一致實施與執法。2024-2029 規劃將能力建設與公約實施深度整合，特別強調對小島嶼開發中國家(SIDS)和最不發達國家(LDCs)的支持，協助其建立國家海事策略，以確保這些國家不因資源匱乏而在國際海事競爭中脫隊。這中間的發展與 2021.12.15 的 A.1166(32) Capacity-Building Decade 2021-2030 Strategy 以及 2025.12.03 的 A.1205(34) Capacity-Development Strategy 的發佈也有很密切的關係。

SD 1: Ensure implementation of IMO instruments supported by capacity development	確保在能力建構的支援下落實 IMO 各項文書的實施
18 IMO has over 70 years of experience developing more than 50 international treaties, together with the related standards, guidelines and other texts. Only through the entry into force of those instruments and the effective, efficient and consistent implementation and enforcement of their provisions can the full benefits from this extensive body of international law be realized. To that end, it is imperative that IMO place strong focus on the continuous, effective and uniform implementation of IMO instruments by Member States, promotion of the entry into force of instruments, reduction of administrative burdens and delivery of robust capacity development initiatives.	IMO 擁有 70 多年的經驗，制定了 50 多項國際條約以及相關的標準、指南和其他文件。只有透過這些文書的生效以及其條款的有效、高效和一致的實施和執行，才能充分發揮這一龐大國際法體系的益處。為此，IMO 必須高度重視成員國持續、有效且統一地執行 IMO 各項文書，促進文書生效，減輕行政負擔，並開展強有力的能力建設措施。
19 The crucial role played by IMO in creating a level playing field for all States involved in international shipping can only be achieved through continuous, effective and uniform implementation of IMO instruments, their enforcement by the States parties to them, and full compliance by the States concerned and the shipping industry.	國際海事組織(IMO)在為所有參與國際航運的國家創造公平競爭環境方面發揮著至關重要的作用，而這只有透過持續、有效和統一地執行 IMO 各項文書，由締約國執行，以及相關國家和航運業全面遵守才能實現。
20 IMO will provide States and the industry with the information they need to better identify and understand challenges to implementation and enforcement, and will seek ways to address those challenges and reduce administrative burdens, including through analysis of the findings from the Member State Audit Scheme and/or data from other sources. IMO will promote the exchange of best practices among all stakeholders and support the implementation of corrective action plans by States following their audits.	IMO 將向各國和航運業提供所需信息，以便更好地識別和了解執行和實施過程中面臨的挑戰，並將尋求應對這些挑戰和減輕行政負擔的方法，包括分析成員國審計計畫的調查結果和/或其他來源的數據。IMO 將促進所有利害關係人之間交流最佳實踐，並支持各國在審計後實施糾正措施計畫。
21 To achieve the goal of uniform implementation of IMO instruments while supporting inclusive development, IMO will continue to develop and execute projects and partnerships in line with its Capacity Development Strategy and the Organization's resource mobilization strategy, to provide targeted capacity development that fosters, promotes and supports implementation efforts, especially those of developing countries, in particular SIDS and LDCs, paying due attention to their needs.	為實現 IMO 各項文書統一執行的目標，同時支持包容性發展，IMO 將繼續根據其能力發展策略和資源調動策略，制定和實施項目及夥伴關係，以提供有針對性的能力發展，促進和支持各項文書的執行工作，特別是發展中國家(尤其是小島嶼發展中國家和最不發達國家)的執行工作，並充分考慮它們的需求。

績效指標	SD 1: Ensure implementation of IMO instruments supported by capacity development	確保在能力建構的支援下落實 IMO 各項文書的實施
PI 1.1	# of references in audit findings per instrument (article and regulation)	在稽核發現中，針對每一個 IMO 文書(條文與規則)被引用的次數
PI 1.2	% of corrective actions addressing audit findings and observations completed and effectively implemented, according to the target completion dates	針對稽核發現與觀察所提出的矯正行動，在原訂完成日完成的比例，以及完成後是否有效落實的比例
PI 1.3	% of deficiencies and detentions per ship type	依船型統計缺失以及滯留佔比
PI 1.4	# of deficiencies per category of deficiency	依缺失類別統計各類別缺失的件數

績效指標	SD 1: Ensure implementation of IMO instruments supported by capacity development	確保在能力建構的支援下落實 IMO 各項文書的實施
PI 1.5	# of Member States that have ratified each IMO instrument, including those yet to enter into force	包含尚未生效的文書，每一項 IMO 文書分別有多少會員國已批准
PI 1.6	% of the world's merchant shipping (tonnage) covered by each IMO instrument, including those yet to enter into force	以全球商船噸位計算，包含尚未生效的文書，每一項 IMO 文書的實質涵蓋率
PI 1.7	# of technical cooperation programmes/activities, including project activities, developed and implemented in the identified areas requiring technical assistance as a result of the analysis of the IMO Member State Audit Scheme (IMASAS) Consolidated Audit Summary Reports (CASRs)	因分析成員國稽核計畫(IMASAS)綜合稽核概要報告(CASRs)而辨識出的需要技術協助的領域，IMO 實際開發並執行了多少技術合作計畫/活動(含專案活動)
PI 1.8	# of technical cooperation programmes/activities, including project activities, requested by Member States, developed and implemented, related to the implementation of corrective actions to address (1) IMASAS audit findings and (2) observations	由會員國提出需求，IMO 因而開發並執行的技術合作計畫/活動數量，且這些活動必須直接對應：(1)稽核發現的矯正行動落實，及(2)稽核觀察的改善

Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ(s)
1.1	Capacity-building aspects of the IMO Audit Scheme are reflected in and implemented through the Integrated Technical Cooperation Programme (ITCP) IMO 稽核制度的能力建構面向，反映並透過整合式技術合作計畫(ITCP)加以落實	Continuous	TCC		
1.2	Input on identifying emerging needs of developing countries, in particular SIDS and LDCs to be included in the ITCP 就辨識開發中國家(特別是小島嶼開發中國家 SIDS 與最不發達國家 LDCs)的新興需求提供意見，並納入 ITCP	Continuous	TCC	MSC / MEPC / FAL / LEG	
1.3	Development of amendments to chapter 6 of the 2009 MODU Code regarding electrical equipment capable of operation after shutdown 制定《2009 年移動式離岸鑽井裝置(MODU)規範》第 6 章之修正案，關於可在停機後仍能運作的電氣設備	2026	MSC	SSE	SDC
1.4	Analysis of consolidated audit summary reports 彙整稽核摘要報告的分析	Continuous	Assembly	MSC / MEPC / LEG / TCC / III	Council
1.5	Non-exhaustive list of obligations under instruments relevant to the IMO Instruments Implementation Code (III Code) 彙整與《IMO 文書實施規範》相關文書下的非詳盡義務清單	Continuous	MSC / MEPC	III	
1.6	Monitoring of the ITCP programme implemented on the enhancement of maritime training capacities, including middle and senior management levels 監測為加強海事培訓能力(包括中高層管理水平)而執行的 ITCP 計畫	Annual	TCC		
1.7	Identify thematic priorities within the area of maritime safety and security, marine environmental protection, facilitation of maritime traffic and maritime legislation 確定海事安全與保安、海洋環境保護、海上交通便利化和海事立法領域的主題優先事項	Annual	TCC	MSC / MEPC / FAL / LEG	
1.8	Analysis and consideration of reports on National Maritime Transport Policy development and Country Maritime Profiles 分析和審議關於國家海運政策發展和國家海事概況的報告	Annual	TCC		
1.9	Report on activities within ITCP related to the OPRC Convention and the OPRC-HNS Protocol 關於 ITCP 內與 OPRC 公約和 OPRC-HNS 議定書相關活動的報告	Annual	TCC	MEPC	

Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ(s)
1.10	Report on the ITCP programme on support for SIDS and LDCs for their special shipping needs 關於支持 SIDS 和 LDCs 特殊航運需求的 ITCP 計畫報告	Annual	TCC		
1.11	Measures to harmonize port State control (PSC) activities and procedures worldwide 協調全球港口國監督活動和程序的措施	Continuous	MSC / MEPC	HTW / PPR / NCSR	III
1.12	Development of guidelines or best practices related to the registration of ships 開發與船舶登記相關的指南或最佳做法	2027	LEG		
1.13	Development of amendments to paragraph 2.1.2.5 of chapter 5 of the FSS Code on construction requirements for gaskets 開發 FSS 規則第 5 章第 2.1.2.5 段關於墊圈構造要求的修正案	2026	MSC	SSE	
1.14	Development of engine control room alert management (ECRAM) performance standards 開發機艙控制室警報管理(ECRAM)性能標準	2028	MSC	HTW / SSE	SDC
1.15	Review of the Casualty Investigation Code and the associated implementation guidelines (resolution A.1075(28)) 審查《事故調查規則》及其相關執行指南(第 A.1075(28)號決議)	2028	MSC	III	
1.16	Experience-building phase (EBP) for the reduction of underwater radiated noise from shipping 減少航運水下輻射噪聲的經驗累積階段(EBP)	2026	MEPC	SDC	
1.17	Development of guidelines for the use of ammonia cargo as fuel and provisions for the use of alternative fuels other than cargo on gas carriers 開發將氨貨物用作燃料的指南，以及氣體運輸船使用貨物以外替代燃料的規定	2026	MSC	CCC	
1.19	Approve ITCP for 2028-2029 批准 2028-2029 年的 ITCP	2027	TCC		
1.23	Evaluation and harmonization of rules and guidance on the discharge of discharge water from EGCS into the aquatic environment, including conditions and areas 評估並協調關於廢氣清洗系統(EGCS)排放水排入水生環境的規則和指南(包括條件和區域)	2026	MEPC	PPR	
1.24	Review of the BWM Convention based on data gathered in the experience-building phase 根據經驗累積階段收集的數據審查《壓載水管理(BWM)公約》	2027	MEPC	PPR	
1.25	Urgent measures emanating from issues identified during the experience-building phase of the BWM Convention 針對《壓載水管理(BWM)公約》經驗累積階段所識別問題採取的緊急措施	2027	MEPC		
1.26	Revision of MARPOL Annex IV and associated guidelines 修訂 MARPOL 附則 IV 及相關指南	2027	MEPC	III / HTW	PPR
1.31	Measures to prevent unlawful practices associated with the fraudulent registration and fraudulent registries of ships 防止與船舶虛假登記和虛假登記處相關非法行為的措施	2027	LEG		
1.32	Regulatory scoping exercise of IMO conventions and other instruments available for Member States to further develop actions to prevent unlawful operations including substandard ships 對 IMO 公約和其他法律文書進行監管範圍界定研究，供成員國進一步採取行動防止非法營運(包括低標準船舶)	2027	LEG		
1.34	Development of global maritime SAR services, including harmonization of maritime and aeronautical procedures and amendments to the IAMSAR Manual 發展全球海事搜救(SAR)服務，包括協調海事和航空程序以及對 IAMSAR 手冊的修正	Continuous	MSC	NCSR	

SD 2：將新興與先進技術納入監管框架 (Integrate new, emerging and advancing technologies in the regulatory framework)

在第四次工業革命的背景下，航運業正經歷數位化轉型。當 A.989、A.1060 時，科技仍被視為「外部趨勢」，然而在 MASS、數位化、AI 出現後，傳統船舶/人員/責任架構開始失效。IMO 意識到，不治理科技，科技就會反過來破壞安全與責任體系。IMO 的策略是建立「技術中立」的監管環境，既不偏袒特定技術，也不阻礙創新。2024-2029 規劃的重點包括檢視既有公約是否適用於新科技，同時也發展或調整規範以涵蓋自主船舶(Autonomous ships, MASS)、數位化與資料治理(Digitalization, data governance)、網路風險與人工智慧輔助營運(Cyber risk, AI-assisted operations)，以確保安全、保安、環境保護不會科技進展而被削弱。

SD 2: Integrate new, emerging and advancing technologies in the regulatory framework	將新興與先進科技整合進法規架構
22 As technological development accelerates, new, emerging and advancing technologies will foster a more digitalized, interconnected and efficient industry closely integrated with the global supply chain. New, emerging and advancing technologies are also contributing towards making shipping safer and more efficient, and towards the enhancement of environmental protection. They have already brought about changes at all levels in the way ships are designed, constructed, equipped, operated and managed.	隨著技術發展的加速，新興技術將促進航運業更加數位化、互聯互通和高效化，並與全球供應鏈緊密結合。新興技術也有助於提高航運的安全性和效率，並加強環境保護。它們已經從各個層面改變了船舶的設計、建造、裝備、營運和管理方式。
23 Technological advancement also presents new opportunities for the shipping industry through the simplification of processes, greater data and information exchange between ports and ships, and automation. Moving ahead, such technologies are expected to feature more prominently as the Organization addresses decarbonization and digitalization.	技術進步也透過簡化流程、加強港口與船舶之間的數據和資訊交換以及實現自動化，為航運業帶來了新的機會。展望未來，隨著本組織致力於脫碳和數位化，預計這些技術將發揮更重要的作用。
24 Since technological advances present opportunities as well as challenges, their use needs to be considered carefully in order for them to be accommodated appropriately into the regulatory framework of the Organization. This involves balancing the benefits derived from new, emerging and advancing technologies with maritime safety and security concerns, cybersecurity, environmental concerns, potential for international trade facilitation, costs and the impact on personnel, both on board and ashore.	由於技術進步既帶來機會也帶來挑戰，因此需要認真考慮其應用，以便將其適當地納入本組織的監管架構。這需要在新興和先進技術帶來的益處與海上安全保障、網路安全、環境問題、國際貿易便利化的潛力、成本以及對船上和岸上人員的影響之間取得平衡。
25 The Organization's regulatory framework will be continually adapted to the challenges and global developments facing the shipping industry, with a view to ensuring safety, security and environmental protection. The Organization will strive towards a legal framework that accommodates new and advancing technologies and approaches; it will do so by being technology neutral, developing IMO instruments and performance standards without hindrance or preference for one technology over another. In addressing new, emerging and advancing technologies, the Organization will also take into account the needs of developing countries, in particular SIDS and LDCs.	本組織的監管架構將持續調整，以適應航運業面臨的挑戰和全球發展，從而確保安全屏障和環境保護。本組織將努力建立一個能夠容納新興和先進技術及方法的法律架構；為此，本組織將保持技術中立，在製定國際海事組織(IMO)文書和性能標準時，不偏袒任何一種技術。在應對新興和先進技術時，本組織也將考慮到發展中國家，特別是小島嶼發展中國家(SIDS)和最不發達國家(LDCs)的需求。

績效指標	SD 2: Integrate new, emerging and advancing technologies in the regulatory framework	將新興與先進科技整合進法規架構
PI 2.1	# of proposals submitted to IMO to incorporate new, emerging and advancing technologies into the regulatory framework	各方要求/建議 IMO 將某些新興、正在出現或更進階的科技納入既有法規架構向 IMO 提交的提案數量
PI 2.2	# of outputs to include new, emerging and advancing technologies (as specified in PI 2.1) on the agenda of IMO organs	因 PI 2.1 那些提案已被納入 IMO 各組織議程且有成果的數量

Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ(s)
2.1	Response to matters related to the ITU-R Study Groups and ITU World Radiocommunication Conference 回應與國際電信聯盟無線電通信部門(ITU-R)研究組及國際電信聯盟世界無線電通信大會(WRC)相關的事務	Continuous	MSC	NCSR	
2.2	Approved ballast water management systems which make use of Active Substances, taking into account recommendations of the GESAMP-BWWG 考量 GESAMP 壓載水管理活性物質工作組(GESAMP-BWWG)的建議，批准使用活性物質的壓載水管理系統	Continuous	MEPC		
2.3	Amendments to the IGF Code and development of guidelines for alternative fuels and related technologies 《國際使用氣體或其他低閃點燃料船舶安全規則》(IGF Code)的修正，以及替代燃料與相關技術指南的開發	Continuous	MSC	HTW / PPR / SDC / SSE	CCC
2.4	Review and amendment of the NTC 2008 to provide a means for certification of engines that operate on non-carbon-containing fuel or mixtures of carbon-containing and non-carbon-containing fuels 審查並修訂《2008 年氮氧化物技術規則》(NTC 2008)，以為使用不含碳燃料或含碳與不含碳混合燃料的發動機提供認證方式	2027	MEPC	PPR	
2.5	Development of a transition scheme for the introduction of digital technology for very high frequency (VHF) voice communications 為甚高頻(VHF)語音通信引入數字技術開發過渡方案	2027	MSC	NCSR	
2.6	Guidelines for the use of fibre-reinforced plastics (FRP) within ship structures 在船舶結構中使用纖維增強塑料(FRP)的指南	2026	MSC	SDC	
2.7	Development of performance standards for dual frequency multi-constellation satellite-based augmentation systems (DFMC SBAS) and advanced receiver autonomous integrity monitoring (ARAIM) in shipborne radionavigation receivers 為船載無線電導航接收機中的雙頻多星座衛星增強系統(DFMC SBAS)和高級接收機自主完整性監測(ARAIM)開發性能標準	2027	MSC		
2.8	Revision of the Guidelines on Maritime Cyber Risk Management (MSC-FAL.1/Circ.3/Rev.2) and identification of next steps to enhance maritime cybersecurity 修訂《海事網絡風險管理指南》(MSC-FAL.1/Circ.3/Rev.2)並確定增強海事網絡安全的後續步驟	2026	MSC	FAL	MSC
2.9	Revision of SOLAS chapters II-1 (part C) and V, and related instruments regarding steering and propulsion requirements, to address both traditional and non-traditional propulsion and steering systems 修訂《國際海上人命安全公約》(SOLAS)第 II-1 章(C 部分)和第 V 章，以及關於轉向和推進要求的相關文書，以應對傳統和非傳統的推進與轉向系統	2028	MSC	SSE	SDC
2.10	Measures to address maritime autonomous surface ships (MASS) in the instruments under the purview of the Legal Committee 在法律委員會權限範圍內的文書中應對海上自主水面船舶(MASS)的措施	2027	LEG		
2.11	Development of a comprehensive strategy on maritime digitalization 開發海事數字化綜合策略	2027	FAL	MSC / MEPC	
2.12	Development of guidance to establish a framework for data distribution and global	2026	MSC	NCSR	

Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ(s)
	IP-based connectivity between shorebased facilities and ships for ECDIS S100 products 為電子海圖顯示與信息系統(ECDIS) \$S100 產品開發指導，以建立岸基設施與船舶之間的數據分配和基於全球 IP 的連接框架				
2.13	Review of the IBTS Guidelines and amendments to the IOPP Certificate and Oil Record Book 審查整合船底水處理系統(IBTS)指南，並修正國際防止油污證書(IOPP Certificate)和油類記錄簿	2026	MEPC	PPR	
2.14	Revision of the Performance standards for gyro-compasses (resolution A.424(XI)) and Guidance for navigation and communication equipment intended for use on ships operating in polar waters (MSC.1 / Circ.1612) 修訂《電羅經性能標準》(A.424(XI)號決議)以及《極地水域營運船舶航行和通信設備指南》(MSC.1/Circ 1612)	2028	MSC	NCSR	
2.15	Development of operational guidance for route exchange 開發航線交換的操作指南	2026	MSC	NCSR	
2.16	Revision of SOLAS chapter III and the International Life-Saving Appliance (LSA) Code 修訂 SOLAS 第 III 章和《國際救生設備規則》(LSA Code)	2027	MSC	SSE	
2.17	Development of performance standards for Ranging mode (R-mode) in radionavigation receivers 為無線電導航接收機中的測距模式(R-mode)開發性能標準	2027	MSC	NCSR	
2.18	Development of guidelines for EPIRB which implement the two-way communication service via the SAR / Galileo Return Link service as a complement to EPIRB performance standards (resolution MSC.471(101)) 為通過搜救(SAR)/伽利略返向鏈路服務實現雙向通信服務的應急無線電示位標(EPIRB)開發指南，作為 EPIRB 性能標準(MSC.471(101)號決議)的補充	2026	MSC	NCSR	
2.21	Review of Formal Safety Assessment (FSA) studies by the FSA Experts' Group 由綜合安全評估(FSA)專家組審查綜合安全評估研究	Continuous	MSC		
2.23	Development of a goal-based instrument for maritime autonomous surface ships (MASS) 為海上自主水面船舶(MASS)開發基於目標的文書	2026	MSC		
2.25	Revision of the Interim recommendations for carriage of liquefied hydrogen in bulk 修訂《散裝運輸液態氫臨時建議》	2026	MSC	CCC	
2.26	Measures to address maritime autonomous surface ships (MASS) in the instruments under the purview of the Facilitation Committee 在便利運輸委員會權限範圍內的文書中應對海上自主水面船舶(MASS)的措施	2027	FAL		

SD 3：應對氣候變遷並減少國際航運溫室氣體排放(Respond to climate change and reduce greenhouse gas emissions from international shipping)

在 A.989 以前 IMO 仍以「污染防治」為主，A.1060 \Rightarrow A.1149 調整為能源效率與空污，2020 年後，航運被納入全球氣候責任體系，到了 A.1196，氣候不再是環境議題，而是結構性轉型任務。在 2024-2029 規劃的具體內涵包括推動溫室氣體減量/淨零排放(GHG reduction / net-zero)、替代燃料(Alternative fuels)、海洋生物多樣性保育(Marine biodiversity protection)，並須確保技術可行性與不同國家能力差異被考量。至於最新的 2023 IMO GHG 策略，則設定在 2050 年左右達成淨零排放的宏大目標。

SD 3: Respond to climate change and reduce greenhouse gas emissions from international shipping	應對氣候變遷並減少國際航運溫室氣體排放
26 With the adoption of the 2030 Agenda and the Paris Agreement at the twenty-first session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 21), climate change has been recognized as one of the greatest challenges of our time, a phenomenon whose consequences have negative impacts on the planet and which can undermine the ability of all countries to achieve sustainable development.	隨著《2030 年議程》和《巴黎協定》在聯合國氣候變遷綱要公約第二十一屆締約方大會 (COP21) 上獲得通過，氣候變遷已被公認為當今時代最嚴峻的挑戰之一。氣候變遷的後果會對地球造成負面影響，並可能削弱各國實現永續發展的能力。
27 Although shipping is one of the most energy-efficient modes of transportation, the maritime sector continues to pursue strategies and measures to reduce greenhouse gas (GHG) emissions from international shipping worldwide. Having already developed global regulations on energy efficiency for ships, the Organization continues to take concrete actions to ensure that international shipping bears its fair share of responsibility in addressing climate change. IMO adopted the Initial Strategy on Reduction of GHG Emissions from Ships in 2018, which has been replaced by the 2023 IMO Strategy on Reduction of GHG Emissions from Ships (2023 IMO GHG Strategy) with the strengthened ambition to peak GHG emissions as soon as possible and to reach net zero GHG emissions by or around, i.e. close to, 2050, taking into account different national circumstances, while pursuing efforts towards phasing them out, consistent with the long-term temperature goal set out in Article 2 of the Paris Agreement. The 2023 IMO GHG Strategy also outlines IMO's commitment to further develop and implement GHG reduction measures and the need to consider the impacts of measures on States. Particular attention should be paid to the needs of developing countries, in particular LDCs and SIDS.	儘管航運是最節能的運輸方式之一，但海事部門仍在不斷尋求策略和措施，以減少全球國際航運的溫室氣體排放。本組織已製定了船舶能源效率的全球法規，並將繼續採取具體行動，確保國際航運在應對氣候變遷方面承擔其應盡的責任。國際海事組織(IMO)於2018 年通過了《船舶溫室氣體減排初步策略》，該策略已被《2023 年國際海事組織船舶溫室氣體減排策略》(簡稱《2023 年國際海事組織溫室氣體減排策略》)取代。新策略強化了其雄心壯志，力爭盡快實現溫室氣體排放達峰，並在 2050 年前後(即接近 2050 年)實現淨零排放，同時考慮到各國國情，努力逐步淘汰溫室氣體排放，這與《巴黎協定》第二條規定的長期溫控目標相一致。《2023 年國際海事組織溫室氣體減量策略》也概述了國際海事組織進一步製定和實施溫室氣體減排措施的承諾，以及考慮各項措施對各國影響的必要性。尤其應關注發展中國家，特別是最不發達國家和小島嶼發展中國家的需求。
28 In its role as the global regulator of international shipping, IMO will develop appropriate measures and solutions to reduce the shipping industry's contribution to air pollution and its impact on climate change. This includes measures to facilitate international shipping's transition to zero or near-zero GHG emission technologies, fuels and/or energy sources, as these will be integral to achieving the overall level of ambition in the 2023 IMO GHG Strategy. IMO will also develop a safety regulatory framework to support the reduction of GHG emissions from ships using new technologies and alternative fuels. In doing so, IMO will address the human element, including the impact on seafarers and other maritime professionals, to ensure the safe implementation of the 2023 IMO GHG Strategy.	作為國際航運的全球監管機構，國際海事組織(IMO)將制定適當的措施和解決方案，以減少航運業對空氣污染及其對氣候變遷的影響。這包括採取措施促進國際航運向零排放或近零排放的溫室氣體技術、燃料和/或能源轉型，因為這些措施對於實現 2023 年 IMO 溫室氣體策略的總體目標至關重要。IMO 還將制定安全監管框架，以支持使用新技術和替代燃料的船舶減少溫室氣體排放。在此過程中，IMO 將關注人為因素，包括對海員和其他海事專業人員的影響，以確保 2023 年 IMO 溫室氣體策略的安全實施。

績效指標	SD 3: Respond to climate change and reduce greenhouse gas emissions from international shipping	應對氣候變遷並減少國際航運溫室氣體排放
PI 3.1	# tonnes of CO ₂ emissions from international shipping	國際航運的 CO ₂ 排放總量(以噸計)

績效指標	SD 3: Respond to climate change and reduce greenhouse gas emissions from international shipping	應對氣候變遷並減少國際航運溫室氣體排放
PI 3.2	% of improvement in attained Energy Efficiency Design Index (EEDI) and Energy Efficiency Existing Ship Index (EEXI) against the reference line per ship type	依船型分別計算，達成的 EEDI 與 EEXI 相對於參考線的改善百分比
PI 3.3	US\$ expenditure on funding of technical cooperation activities and major projects related to energy efficiency and reduced emissions	IMO 在能效與減排相關的技術合作活動與重大專案的資金投入(美元)
PI 3.4	% of ships per ship type with a C, B or A Carbon Intensity Indicator (CII) rating	依船型統計，CII 評級落在 C/B/A 的船舶比例
PI 3.5	% of energy used by international shipping originating from zero and near-zero GHG emission technologies, fuels and energy sources	國際航運所使用能源中，有多少比例來自零或近零溫室氣體排放的技術、燃料與能源來源

Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ(s)
3.1	Treatment of ozone-depleting substances used by ships 船舶使用消耗臭氧層物質的處理	Continuous	MEPC		
3.2	Further development of mechanisms is needed to achieve the reduction of GHG emissions from international shipping 需要進一步開發相關機制，以實現減少國際航運的溫室氣體(GHG)排放	Continuous	MEPC		
3.3	Reduction of the impact on the Arctic of emissions of Black Carbon from international shipping 減少國際航運黑碳(Black Carbon)排放對北極的影響	2027	MEPC	PPR	
3.4	Promotion of technical cooperation and transfer of technology relating to the reduction of GHG emissions from ships 促進與減少船舶溫室氣體排放相關的技術合作與技術轉讓	Continuous	MEPC		
3.5	Revision of guidelines concerning chapter 4 of MARPOL Annex VI 修訂關於 MARPOL 附則 VI 第 4 章的指南	2027	MEPC		
3.6	EEDI reviews required under regulation 24.6 of MARPOL Annex VI 根據 MARPOL 附則 VI 第 24.6 條法規要求的能源效率設計指數(EEDI)審查	2027	MEPC		
3.7	Further technical and operational measures for enhancing the energy efficiency of international shipping 提高國際航運能源效率的進一步技術和營運措施	2027	MEPC		
3.8	Development of a safety regulatory framework to support the reduction of GHG emissions from ships using new technologies and alternative fuels 開發安全監管框架，以支持使用新技術和替代燃料來減少船舶溫室氣體排放	Continuous	MSC	MEPC / III / HTW / CCC / SDC / SSE	MSC

SD 4：持續參與海洋治理(Continue to engage in ocean governance)

關於海洋治理，早期 IMO 僅專注於「船舶」，海洋治理議題擴大後，規劃重點擴大到生態、海域使用、與多邊治理。IMO 必須確保，航運治理不被排除在整體海洋治理之外。2024-2029 策略規劃包括與 UN 體系及其他國際組織協調，確保航運議題在海洋治理中被正確納入。

SD 4: Continue to engage in ocean governance	持續參與海洋治理
29 The use of the world's oceans has intensified as a result of the continuing increase in the exploration and use of marine resources, given the opportunities they present. It is important to preserve the ocean for its users and those that are dependent on it.	鑑於海洋資源蘊藏的機會，隨著海洋資源探勘與利用的不斷增加，世界海洋的利用強度也隨之增加。保護海洋，造福海洋使用者和依賴海洋生存的人至關重要。
30 To support the sustainable development of activities in marine spaces, such activities have to be balanced with the capacity of the ocean to remain healthy and diverse in the long term.	為支持海洋空間活動的永續發展，必須平衡這些活動與海洋長期保持健康和多樣性的能力。
31 IMO will continue to actively engage, collaborate and cooperate with the United Nations, its agencies and other relevant bodies to address ocean governance issues, including promoting the sustainable development of activities in and the use of marine spaces. In doing so, IMO will endeavour to ensure that the use of marine spaces does not disproportionately limit the ability of shipping to support and contribute to the global economy, socio-economic progress and development, and to assist in delivering related aspects of the SDGs.	國際海事組織將繼續積極與聯合國及其機構和其他相關機構合作，共同應對海洋治理議題，包括促進海洋空間活動的永續發展和利用。為此，國際海事組織將努力確保海洋空間的利用不會過度限制航運支持和促進全球經濟、社會經濟進步和發展的能力，也不會影響實現永續發展目標的相關方面。
32 Safe, secure and sustainable shipping is integral to ocean governance. IMO will continue to take action to improve maritime safety and security, to prevent pollution from ships, and to reduce threats to biodiversity, in order to support the protection of marine spaces that helps preserve the marine environment and human health.	安全、可靠且永續的航運是海洋治理不可或缺的一部分。國際海事組織將繼續採取行動，改善海上安全保障，防止船舶污染，減少對生物多樣性的威脅，以支持保護海洋空間，進而維護海洋環境和人類健康。

績效指標	SD 4: Continue to engage in ocean governance	持續參與海洋治理
PI 4.1	# of Special Areas designated under MARPOL, including Emission Control Areas (ECAs)	MARPOL 架構下，包含排放控制區 (ECAs)，被指定的特殊區域數量
PI 4.2	# of Particularly Sensitive Sea Areas (PSSAs) designated	IMO 指定之特別敏感海域(PSSAs)數量
PI 4.3	# of meetings on Ocean Governance at which the Organization was represented	IMO 代表出席的海洋治理相關會議場次
PI 4.4	US\$ expenditure on technical cooperation activities and capacity development related to Ocean Governance	投入到海洋治理相關技術合作與能力建構的經費(美元)

Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ(s)
4.1	Identification and protection of Special Areas, Emission Control Areas and PSSAs and associated protective measures 識別與保護特別區域、排放控制區(ECA)和特別敏感海域(PSSA)及其相關保護措施	Continuous	MEPC	NCSR	
4.2	Input to the ITCP on emerging issues relating to sustainable development and achievement of the SDGs 向 ITCP 提供關於可持續發展和實現可持續發展目標(SDGs)相關新興議題的投	Continuous	TCC	MSC / MEPC / FAL / LEG	

Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ(s)
	入				
4.3	Follow-up work emanating from the Action Plan to Address Marine Plastic Litter from Ships 應對船舶塑料垃圾行動計畫的後續工作	2027	MEPC	III / HTW / PPR	

SD 5：加強全球便利化、供應鏈韌性與國際貿易安全(Enhance global facilitation, supply chain resilience, and security of international trade)

傳統的所謂 facilitation 或許僅在於文件、通關，但 COVID-19、戰爭、地緣政治後，供應鏈中斷成為系統性風險。IMO 首次把 facilitation × resilience × security 放在同一個 SD 中，即可見其重要性。2024-2029 策略規劃的具體內容包括改善國際航運與貿易的程序效率、提升供應鏈對危機的承受與復原能力，並能處理保安威脅、非傳統風險以及跨境衝擊等。

SD 5: Enhance global facilitation, supply chain resilience, and security of international trade	加強全球便利化、供應鏈韌性與國際貿易安全
33 Shipping moves over 80% of world trade, making it an integral part of the global economy and supply chain. Preventing the disruption of international shipping is therefore in the global economic interest. Continued effort is needed to ensure that ships move from port to port without undue delay arising from arrival and departure formalities, to provide for safe, reliable transportation and effective facilitation of international trade, and to ensure that appropriate security measures are in place on all international voyages.	航運運輸佔全球貿易 80%以上，是全球經濟和供應鏈不可或缺的一部分。因此，防止國際航運中斷符合全球經濟利益。需要持續努力，確保船舶在港口間航行，避免因到港和離港手續而造成不必要的延誤，提供安全可靠的運輸，有效促進國際貿易，並確保所有國際航程都採取適當的安全措施。
34 Drawing on the experience gained and lessons learned during the COVID-19 pandemic, IMO will continue to strengthen the resilience of the global supply chain and maritime industry to enable the continued flow of goods through international shipping in times of crisis. This includes strengthening the care and recognition of seafarers and appreciation of the role of the maritime industry in facilitating international trade.	借鑒新冠疫情期间累積的經驗和教訓，國際海事組織將繼續加強全球供應鏈和海運業的韌性，以確保在危機時期貨物能夠繼續透過國際航運流通。這包括加強對海員的關懷和認可，並重視航運業在促進國際貿易方面所扮演的角色。
35 Threats such as piracy and armed robbery against ships could disrupt international trade, threaten lives and increase the burden on maritime transport. Furthermore, to ensure the safety and security of the maritime transport network, including vital shipping lanes, IMO will continue to raise awareness of measures for safety and security, and to encourage a cooperative approach among Member States and stakeholders, such as through timely and effective information-sharing.	海盜行為和武裝搶劫等針對船舶的威脅可能會擾亂國際貿易，危及生命，並加重海運的負擔。此外，為確保包括重要航道在內的海上運輸網絡的安全，國際海事組織將繼續提高公眾對安全保障措施的認識，並鼓勵成員國和利益相關者採取合作方式，例如透過及時有效的資訊共享。
36 Shipping operations are increasingly dependent on	航運作業日益依賴電子和數位技術，因此面

SD 5: Enhance global facilitation, supply chain resilience, and security of international trade	加強全球便利化、供應鏈韌性與國際貿易安全
electronics and digital technologies, and as such are exposed to cyber risks. Within its mandate, the Organization will continue to monitor and address unlawful and fraudulent practices in the international maritime sector, including fraudulent registries and registration of ships, and encourage a cooperative approach among Member States and stakeholders.	臨網路風險。國際海事組織將在其職權範圍內，繼續監控和打擊國際海事領域的非法和欺詐行為，包括船舶的欺詐性登記和註冊，並鼓勵成員國和利益攸關方採取合作方式。
37 In strengthening the prevention and suppression of illicit activities in the maritime sector, including maritime corruption, IMO will further encourage collaboration and coordination at the international, regional and national levels, and between government agencies, maritime transport operators, ports, shippers, seafarers and other stakeholders.	為加強預防和打擊海事領域的非法活動，包括海上腐敗，國際海事組織將進一步鼓勵在國際、區域和國家層面，以及政府機構、海運經營者、港口、托運人、海員和其他利益攸關方之間開展合作與協調。
38 To enhance global facilitation, IMO will seek further international consensus on reducing, simplifying and standardizing the information required for communications between ships, ports and authorities. The Organization will develop and promote global standards and solutions, such as those related to maritime single window systems, that reduce administrative burdens by facilitating electronic information exchange and balancing the needs of authorities ashore with the interests of the shipping industry.	為加強全球便利化，國際海事組織將尋求就減少、簡化和標準化船舶、港口和主管機構之間通信所需的資訊達成進一步的國際共識。該組織將制定和推廣全球標準和解決方案，例如與海事單一窗口系統相關的標準和解決方案，透過促進電子資訊交換來減輕行政負擔，並平衡岸上當局的需求與航運業的利益。

績效指標	SD 5: Enhance global facilitation, supply chain resilience, and security of international trade	加強全球便利化、供應鏈韌性與國際貿易安全
PI 5.1	# of Contracting Parties to the FAL Convention submitting notifications pursuant to article VIII of the FAL Convention	依據 FAL Convention 第 VIII 條所提交的通知之締約方數量
PI 5.2	# of Member States issuing electronic certificates	能夠簽發電子證書的會員國數量
PI 5.3	# of Member States with a system for the electronic exchange of information	具備電子資訊交換系統的會員國數量
PI 5.4	# of piracy incidents per geographical area of incident reported to IMO	依事件地理區域統計通報給 IMO 的海盜事件數量
PI 5.5	# of stowaway incidents reported to IMO	通報給 IMO 的偷渡事件數量
PI 5.6	US\$ expenditure on technical cooperation activities and capacity development allocated to facilitation matters	分配到便利化相關技術合作與能力建構的經費(美元)
PI 5.7	US\$ expenditure on technical cooperation activities and capacity development allocated to security matters	分配到保安相關技術合作與能力建構的經費(美元)

Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ(s)
5.1	Application of single window concept 單一窗口概念的應用	Continuous	FAL		
5.2	Guidelines and guidance on the implementation and interpretation of SOLAS	Continuous	MSC		

Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ(s)
	chapter XI-2 and the ISPS Code 關於執行和解釋 SOLAS 第 XI-2 章和《國際船舶和港口設施保安規則》(ISPS Code)的指南和指導				
5.3	Consideration and analysis of reports on piracy and armed robbery against ships 審議和分析關於針對船舶的海盜和武裝劫持行為的報告	Continuous	MSC		
5.4	Revised guidance relating to the prevention of piracy and armed robbery to reflect emerging trends and behaviour patterns 修訂關於預防海盜和武裝劫持的指導，以反映新興趨勢和行為模式	Continuous	MSC	LEG	
5.5	Analysis and consideration of reports on the linkages between the Integrated Technical Cooperation Programme (ITCP) and the 2030 Agenda for Sustainable Development, including the Sustainable Development Goals (SDGs) 分析和審議關於綜合技術合作計畫(ITCP)與 2030 年可持續發展議程(包括可持續發展目標 SDGs)之間聯繫的報告	Annual	TCC		
5.6	Development of amendments to the Revised guidelines on the prevention of access by stowaways and the allocation of responsibilities to seek the successful resolution of stowaway cases (resolutions FAL.13(42) and MSC.448(99)) 開發關於預防偷渡者登船以及分配責任以成功解決偷渡案件的修訂指南修正案	2027	FAL	MSC	
5.7	Amendments to the FAL Convention to introduce mandatory reporting of the API and BRI for maritime transport 修正《便利運輸公約》(FAL Convention)，為海運引入預報旅客信息(API)和預報行李信息(BRI)的強制性報告	2026	FAL		
5.8	Review and revision of the IMO Compendium on Facilitation and Electronic Business, including additional e-business solutions 審查和修訂《IMO 便利運輸與電子商務綱要》，包括增加電子商務解決方案	Continuous	FAL		
5.9	Development of amendments to the Revised guidelines for the prevention and suppression of the smuggling of drugs, psychotropic substances and precursor chemicals on ships engaged in international maritime traffic (resolutions FAL.9(34) and MSC.228(82)) 開發關於預防和打擊國際航行船舶走私毒品、精神藥物和前體化學品的修訂指南修正案	2027	FAL	MSC	
5.10	Amendments to the FAL Convention to introduce mandatory cybersecurity measures to safeguard the maritime single windows 修正《便利運輸公約》，引入強制性網絡安全措施以保護海事單一窗口	2026	FAL		
5.12	Measures to address maritime security threats 應對海事安全威脅的措施	2027	LEG		
5.13	IMO's contribution to addressing unsafe mixed migration by sea IMO 對應對海上不安全混合移民間題的貢獻	2026	MSC / FAL / LEG		

SD 6：關注人為因素(Address the human element)

海員是全球航運的靈魂。早期的 IMO 關注的是 **human error**，後來關注的是 **human element**，COVID-19 crew change 危機後發現人不是系統中的變數，而是系統的基礎。2024-2029 規劃將「**人為因**」獨立為一個完整的策略方向，旨在確保海員的安全、福祉與專業能力，強化海員的訓練、工作條件與心理健康。並推動性別平等與包容。

SD 6: Address the human element	關注人為因素
39 The human element is recognized as a key element of the safety of life at sea and the protection of the marine environment. Furthermore, the human element is important,	人為因素被認為是海上人命安全和海洋環境保護的關鍵要素。此外，在製定和實施確保海上安全保障和防止船舶污染的新舊要求

SD 6: Address the human element	關注人為因素
particularly when developing and implementing new and existing requirements to ensure maritime safety and security and the prevention of pollution from ships.	時，人為因素尤其重要。
40 Although shipping continues to experience a transformation with the development of new, emerging and advancing technologies, including digitalization, the human element continues to play a vital role in the maritime sector both on board and ashore.	儘管航運業隨著包括數位化在內的新興和先進技術的發展而不斷轉型，但人為因素在海事領域(包括船上和岸上)仍然發揮著至關重要的作用。
41 The necessity to take into account the human element in the work of the Organization, accompanied by synergies with the work of the United Nations system, has resulted in the need for increased focus on the human element in the rule-making process.	鑑於本組織的工作必須考慮人為因素，並與聯合國體系的工作產生綜效，因此在規則制定過程中需要更加重視人為因素。
42 In its role as the global regulator of shipping, IMO will build on work already completed to address the human element and will take the human element into account in the review, development and implementation of new and existing requirements. This includes facilitating cooperation among Governments on practices concerning the human element in the maritime sector.	作為全球航運監管機構，國際海事組織將在已完成的關注人為因素的工作基礎上，在審查、制定和實施新舊要求時將人為因素納入考慮。這包括促進各國政府在海事領域人為因素相關實踐的合作。
43 To address human element-related issues, IMO will develop or amend provisions, including but not limited to those related to training, certification and watchkeeping. In doing so, IMO will take into consideration new technologies and alternative fuels, human-centred design principles, safe manning, drills and exercises, fatigue management, operational safety, security and environmental protection, among others.	為解決與人為因素相關的問題，國際海事組織將制定或修訂相關規定，包括但不限於與訓練、認證和值班相關的規定。在此過程中，國際海事組織將考慮新技術和替代燃料、以人為本的設計原則、安全配員、演習和訓練、疲勞管理、作業安全、保全和環境保護等因素。
44 In cooperation with relevant stakeholders, IMO will promote fair treatment of seafarers, gender equality and the empowerment of women, and address seafarer abandonment, bullying and harassment, including sexual assault and sexual harassment.	國際海事組織將與相關利害關係人合作，促進海員的公平待遇、性別平等和婦女賦權，並解決海員被遺棄、霸凌和騷擾(包括性侵犯和性騷擾)等問題。
45 To address the needs of the maritime sector, IMO will take further steps to promote careers in the maritime industry as a means to encourage more people to pursue a maritime profession.	為滿足海事部門的需求，國際海事組織將採取進一步措施，推廣海事產業的職業發展，以鼓勵更多人從事海事職業。

績效指標	SD 6: Address the human element	關注人為因素
PI 6.1	# of reported very serious marine casualties where the human factor has been identified as one of the root causes	在非常嚴重海事事故中，被認定人因屬於根本原因之一的通報件數
PI 6.2	# of inspections with human element-related deficiencies reported to IMO under its purview by port State control (PSC) regimes	各 PSC 機制在檢查中發現、且屬於人因相關缺失並通報至 IMO 的案件數
PI 6.3	# and % of female seafarers as a proportion of the total	以整體海員人口為分母的女性海員

績效指標	SD 6: Address the human element	關注人為因素
	seafarer population	的人數與占比
PI 6.4	# and % of women employed in the maritime sector as a proportion of total personnel employed in the maritime sector	女性在整體海事產業受雇的人數與占比
PI 6.5	# and % of female delegates participating in IMO meetings	參與 IMO 會議的女性代表人數與占比
PI 6.6	# of abandoned seafarers reported to IMO	通報至 IMO 的海員被遺棄案件數
PI 6.7	% of repatriated seafarers by total of abandoned seafarers	全部被遺棄海員之中，已完成遣返的比例

Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ(s)
6.1	Role of the human element 人為因素的作用	Continuous	MSC / MEPC	III / PPR / CCC / SDC / SSE / NCSR	HTW
6.2	Validated model training courses 經過驗證的示範培訓課程	Continuous	MSC / MEPC	III / PPR / CCC / SDC / SSE / NCSR	HTW
6.3	Reports on unlawful practices associated with certificates of competency 關於與適任證書相關非法行為的報告	Continuous	MSC	HTW	
6.4	Consideration of reports on the application of the joint IMO / ILO Guidelines on the fair treatment of seafarers and consequential further actions as necessary 審議關於執行 IMO/ILO 船員公平待遇聯合指南的報告，並根據需要採取後續進一步行動	Annual	LEG		
6.5	Comprehensive revision of the guidelines on the implementation of the ISM Code by Administrations and companies 全面修訂主管機關和公司執行《國際船舶安全營運和防止污染管理規則》(ISM Code) 的指南	2028	MSC	HTW	III
6.6	Revision of the IMO Standard Marine Communication Phrases (resolution A.918(22)) 修訂《IMO 標準航海通信用語》	2028	MSC	HTW	NCSR
6.7	Consider reports on the issue of financial security in case of abandonment of seafarers, and shipowners' responsibilities in respect of contractual claims for personal injury to or death of seafarers, in light of the progress of the amendments to ILO MLC 2006 鑑於 ILO MLC 2006 修正案的進展，審議關於船員被遺棄情況下的財務擔保問題，以及船東對船員人身傷亡合同索賠責任的報告	2027	LEG		
6.8	Fair treatment of seafarers detained on suspicion of committing maritime crimes 對因涉嫌海事犯罪而被拘留船員的公平待遇	2027	LEG		
6.9	Scoping exercise and enhancement of the effectiveness of provisions on fatigue and seafarers' hours of work and rest 關於疲勞以及船員工作和休息時間規定的範圍界定研究及有效性增強	2027	MSC	III	HTW
6.10	Development of an entrant training manual for PSC personnel 為港口國監督(PSC)人員開發入門培訓手冊	2026	MSC / MEPC	III	
6.17	Comprehensive review of the 1978 STCW Convention and Code 全面審查《1978 年 STCW 公約》及其規則	2031	MSC	HTW	

SD 7 : 確保國際航運監管的有效性(Ensure the regulatory effectiveness of international shipping)

這一方向關注法規本身的科學性與適用性，從「有法規」走向「法規是否真的有效」。與 SD 1 不同之處在於，SD 1 強調實施與能力，SD 7 則關心法規設計本身的品質與適切性。具體內容包括透過「成員國審核機制(IMSAS)」的數據分析，識別規章制度中的過時條款或實施盲點。SD 7 追求的是監管的「比例性」與「透明度」，確保每一項新法規都能在不增加過度負擔的情況下，切實提升行業標準。

SD 7: Ensure the regulatory effectiveness of international shipping	確保國際航運監管的有效性
46 The main role of IMO as the global regulator of safe, secure, environmentally sound and efficient shipping requires it to ensure that a universally adopted, effective, international regulatory framework is in place and implemented consistently, embracing and integrating new, emerging and advancing technologies, without causing unnecessary burden.	作為安全、可靠、環保和高效航運的全球監管機構，國際海事組織的主要職責是確保建立並持續實施普遍採用、有效的國際監管框架，同時包容和整合新興技術，避免造成不必要的負擔。
47 The current approach and practices draw on the extensive experience of IMO in developing and adopting standards for international shipping. Reviewing such approaches and practices allows the Organization to identify improvements, reduce administrative burdens, enhance the effectiveness of the existing IMO instruments and better assess the need for new regulations. IMO will take into account the impacts and benefits of the proposed measures, supported by robust decision-making processes, taking into consideration available data, including feedback provided by the IMO Member State Audit Scheme (IMSAS).	目前的方法和做法借鑒了國際海事組織在製定和採納國際航運標準方面的豐富經驗。檢視這些方法和做法有助於本組織發現改進之處，減輕行政負擔，提高現有國際海事組織文書的有效性，並更好地評估制定新法規的必要性。國際海事組織將考慮擬議措施的影響和益處，並以健全的決策程序為支撐，同時考慮現有數據，包括國際海事組織成員國審計計畫(IMSAS)提供的反饋。
48 By focusing on the development of regulations and goal-based standards, IMO will help ensure that IMO instruments continue to be relevant, globally implemented and applicable, and maintain a level playing field. Information, from different sources, including from the Global Integrated Shipping Information System (GISIS) and IMSAS, should be considered as feedback into the regulatory processes of the Organization to allow it to make informed decisions on reviewing existing regulations and developing new ones.	透過專注於制定法規和目標導向標準，國際海事組織將有助於確保國際海事組織文書繼續保持相關性、在全球範圍內實施和適用，並維護公平的競爭環境。來自不同來源的信息，包括來自全球綜合航運資訊系統(GISIS)和 IMSAS 的信息，應被視為對本組織監管流程的反饋，以便本組織能夠就審查現有法規和製定新法規做出明智的決定。

績效指標	SD 7: Ensure the regulatory effectiveness of international shipping	確保國際航運監管的有效性
PI 7.1	# of unified interpretations of provisions per instrument approved by IMO	IMO 文書條文統一解釋經 IMO 核准的數量

Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ(s)
7.1	Unified interpretation of provisions of IMO safety, security, environment, facilitation, liability and compensation-related conventions 對 IMO 安全、保安、環境、便利化、責任和補償相關公約條款的統一解釋	Continuous	MSC / PEPC / FAL / LEG	III / PPR / CCC / SDC / SSE / NCSR	
7.2	Developments in GMDSS services, including guidelines on maritime safety information (MSI)	Continuous	MSC	NCSR	

Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ(s)
	全球海上遇險與安全系統(GMDSS)服務的發展，包括海事安全信息(MSI)指南				
7.3	Safety and pollution hazards of chemicals and preparation of consequential amendments to the IBC Code 化學品的安全和污染危害，以及《國際散裝危險化學品船舶構造與設備規則》(IBC Code)隨之而來的修正案準備	Continuous	MEPC	PPR	
7.4	Lessons learned and safety issues identified from the analysis of marine safety investigation reports 從海事安全調查報告分析中識別出的經驗教訓和安全問題	Continuous	MSC / MEPC	III	
7.5	Identified issues relating to the implementation of IMO instruments from the analysis of data 從數據分析中識別出的與執行 IMO 法律文書相關的問題	Continuous	MSC / MEPC	III	
7.6	Consideration and analysis of reports and information on persons rescued at sea and stowaways 對海上救援人員和偷渡者報告及信息的審議與分析	Continuous	MSC / FAL		
7.7	Consideration and analysis of reports on alleged inadequacy of port reception facilities 審議和分析關於指稱港口接收設施不足的報告	Continuous	MEPC	III	
7.8	Monitoring the worldwide average sulphur content of fuel oils supplied for use on board ships 監測全球船用燃油平均含硫量	Continuous	MEPC		
7.9	Consideration of the review of the rules and guidelines for consultative status of non-governmental international organizations with the International Maritime Organization 審議非政府國際組織與 IMO 諮詢地位之規則和指南的審查	Continuous	Assembly	Council	
7.10	Amendments to the IMDG Code and supplements 《國際海運危險貨物規則》(IMDG Code)及其補充內容的修正	Continuous	MSC	CCC	
7.11	Revision of the Revised guidelines and specifications for pollution prevention equipment for machinery space bilges of ships (resolution MEPC.107(49)) 修訂《機艙艙底廢油水分離設備指南和技術條件》(第 MEPC.107(49)號決議)	2027	MEPC	PPR	
7.12	Strategies developed to facilitate entry into force and harmonized interpretation of the HNS Protocol 為促進《HNS 議定書》生效和統一解釋而開發的策略	2027	LEG		
7.13	Amendments to the IMSBC Code and supplements 《國際海運固體散裝貨物規則》(IMSBC Code)及其補充內容的修正	Continuous	MSC	CCC	
7.14	Assessment of the implementation of the Hong Kong Convention through an experience-building phase and development of amendments and clarifications as appropriate 透過經驗累積階段評估《香港公約》的執行情況，並根據需要開發修正案和澄清	2030	MEPC	PPR	
7.15	Development of amendments to SOLAS chapter II-2 and the FSS Code concerning the detection and control of fires in cargo holds and on the cargo deck of container ships 開發 SOLAS 第 II-2 章和《國際消防安全系統規則》(FSS Code)關於集裝箱船貨艙及貨物甲板火災探測與控制的修正案	2028	MSC	CCC	SSE
7.16	Development of a legally binding framework for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species 開發具有法律約束力的框架，用於船舶生物附著的控制和管理，以減少入侵水生生物的轉移	2029	MEPC	PPR	
7.17	Review and development of NOx emission requirements in MARPOL Annex VI and the NOx Technical Code 2008 審查並開發 MARPOL 附則 VI 和《2008 年氮氧化物技術規則》(NOx Technical Code 2008)中的氮氧化物排放要求	2027	MEPC	PPR	
7.18	Consideration of applications for consultative status and / or periodic review of organizations in consultative status 審議諮詢地位申請及/或對具備諮詢地位的組織進行定期審查	Continuous	Assembly	Council	
7.19	Amendments to the LSA Code for thermal performance of immersion suits	2027	MSC	SSE	

Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ(s)
	修正《國際救生設備規則》(LSA Code)關於浸漬服(救生衣)熱性能的要求				
7.20	Develop measures to prevent the loss of containers at sea 開發防止集裝箱在海上丟失的措施	2026	MSC	III / HTW / SDC / NCSR	CCC
7.21	Amendments to the 2011 ESP Code 修正《2011 年船體檢驗強化計畫規則》	Continuous	MSC	SDC	
7.22	Routeing measures and ship reporting systems 航路劃定措施和船舶報告系統	Continuous	MSC	NCSR	
7.23	Updates to the LRIT system 遠程識別與跟蹤(LRIT)系統的更新	Continuous	MSC	NCSR	
7.24	Verified goal-based new ship construction standards for tankers and bulk carriers 經驗證的油輪和散貨船基於目標的新船建造標準	Continuous	MSC		
7.25	Revision of the Revised guidelines for the maintenance and inspections of fixed carbon dioxide fire-extinguishing systems (MSC.1/Circ.1318/Rev.1) to clarify the testing and inspection provisions for CO2 cylinders 修訂《固定式二氧化碳滅火系統維護和檢查修訂指南》(MSC.1/Circ.1318/Rev.1)，以澄清二氧化碳氣瓶的測試和檢查規定	2026	MSC	SSE	
7.26	Reports to the MSC on information communicated by STCW Parties 針對 STCW 締約國通報信息的向海上安全委員會(MSC)提交之報告	Continuous	MSC		
7.27	Updated Survey Guidelines under the Harmonized System of Survey and Certification (HSSC) 更新《檢驗與發證和諧系統(HSSC)下的檢驗指南》	Continuous	MSC / MEPC	III	
7.28	Consideration of reports of incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas 審議關於船舶或港區內涉及包裝危險貨物或海洋污染物的事故報告	Continuous	MSC / MEPC	III	CCC
7.29	Comprehensive review of the Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release ear (resolution MSC.402(96)) to address challenges with their implementation ear (resolution MSC.402(96)) to address challenges with their implementation 全面審查救生艇、救助艇、降落設備和釋放裝置的維護、徹底檢查、操作測試、大修和修理要求(第 MSC.402(96)號決議)，以應對執行中的挑戰	2027	MSC	SSE	
7.30	Amendments to SOLAS chapter III and chapter IV of the LSA Code to require the carriage of self-righting or canopied reversible liferafts for new ships 修正 SOLAS 第 III 章和 LSA 規則第 IV 章，要求新船攜帶自扶正或帶頂蓬的可反轉救生筏	2027	MSC	SSE	
7.31	Development of amendments to chapter 15 of the FSS Code on enclosed spaces containing a nitrogen receiver or a buffer tank of nitrogen generator systems 開發 FSS 規則第 15 章關於含有氮氣接收器或氮氣生成系統緩衝罐的封閉空間的修正案	2027	MSC	SSE	SDC
7.32	Revision of the Guidelines for the application of plastic pipes on ships (resolution A.753(18)) 修訂《船舶塑料管道應用指南》(第 A.753(18)號決議)	2026	MSC	SDC / SSE	
7.33	Review and, if necessary, amendment of SOLAS regulations II-2/13.4.1.1 and 13.4.2.1 to clarify the requirements on escape arrangements from the lower part of machinery spaces 審查並在必要時修正 SOLAS 法規 II-2/13.4.1.1 和 13.4.2.1，以澄清機艙下部區域逃生裝置的要求	2027	MSC	HTW / SSE	SDC
7.34	Revision of the 2010 FTP Code to allow for new fire protection systems and materials 修訂《2010 年國際耐火試驗程序應用規則》(2010 FTP Code)，以允許使用新的防火系統和材料	2026	MSC	SSE	
7.35	Amendments to section 4.2 of the IMSBC Code regarding the cargo information and sample declaration form to be provided by the shipper 修正 IMSBC 規則第 4.2 節，關於託運人提供的貨物信息和樣品申報單格式	2026	MSC	CCC	
7.36	New requirements for ventilation of survival craft	2027	MSC	SSE	

Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ(s)
	救生艇筏通風的新要求				
7.37	Evaluation of adequacy of fire protection, detection and extinction arrangements in vehicle, special category and ro-ro spaces in order to reduce the fire risk of ships carrying new energy vehicles 評估車輛空間、特種空間和滾裝空間的防火、探測和滅火裝置是否充足，以降低運輸新能源汽車船舶的火災風險	2027	MSC	SSE	
7.38	Amendments to MARPOL Annex II in order to improve the effectiveness of cargo tank stripping, tank washing operations and prewash procedures for products with a high melting point and / or high viscosity 修正 MARPOL 附則 II，以提高高熔點及/或高黏度產品的貨艙掃艙、洗艙操作和預洗程序的效率	2027	MEPC	PPR	
7.39	Review of the financial architecture of the LRIT system 審查 LRIT 系統的財務架構	2026	MSC		
7.40	Revision of the Revised guidelines for the preparation of the cargo securing manual (MSC.1/Circ.1353/Rev.2) to include a harmonized performance standard for lashing software to permit lashing software as a supplement to the Cargo Securing Manual 修訂《貨物積載與加固手冊編制修訂指南》(MSC.1/Circ.1353/Rev.2)，納入加固軟件的統一性能標準，允許加固軟件作為手冊的補充	2026	MSC	CCC	
7.41	Development of provisions to consider prohibiting the use of fire-fighting foams containing fluorinated substances, in addition to PFOS for fire-fighting on board ships 開發相關規定，考慮除 PFOS 外，禁止在船上滅火中使用含有氟化物質的滅火泡沫	2026	MSC	SSE	
7.42	Revision of the Interim explanatory notes for the assessment of passenger ship systems' capabilities after a fire or flooding casualty (MSC.1 / Circ.1369) and related circulars 修訂《火災或淹水事故後客船系統能力評估臨時解釋說明》(MSC.1/Circ.1369) 及相關通函	2027	MSC	HTW / SSE	SDC
7.43	Review of the Casualty Investigation Code and the associated implementation Guidelines (resolution A.1075(28)) 審查《事故調查規則》及其相關執行指南(第 A.1075(28)號決議)	2028	MSC	III	
7.48	Review and update SOLAS regulation II-2/9 on containment of fire to incorporate existing guidance and clarify requirements 審查並更新 SOLAS 法規 II-2/9 關於防火圍護的內容，以納入現有指南並澄清要求	2026	MSC	SSE	
7.51	Suitability of IMO's liability and compensation regime with respect to alternative fuels 評估 IMO 責任與賠償制度對於替代燃料的適用性	2027	LEG		

SD 8：確保組織效能(Ensure organizational effectiveness)

早期的策略規劃偏向對外，新的策略方向認為沒有內部效能，就沒有外部治理能力。2024-2029 規劃的具體內容包括強化內部治理、規劃與管理，明確連結 Strategic Plan、Outputs、Budget，並提升透明度、問責性與決策品質。

SD 8: Ensure organizational effectiveness	確保組織效能
49 To achieve the Organization's vision and strengthen its ability to address current and future challenges and opportunities, IMO will improve its organizational and working practices, where necessary, and foster broader	為實現本組織的願景，並增強其應對當前和未來挑戰與機會的能力，國際海事組織將在必要時改善其組織和工作方式，並促進成員國更廣泛地參與其工作和決策，包括透過使

SD 8: Ensure organizational effectiveness	確保組織效能
participation by Member States in its work and decision-making, including through the use of appropriate technologies. To effectively facilitate its work and improve knowledge sharing, the Organization will consider means of strengthening its technical and analytical capabilities to collect, manage, analyse and report on relevant information and data.	用適當的技術。為有效促進其工作並加強知識共享，本組織將考慮加強其技術和分析能力，以便收集、管理、分析和報告相關資訊和數據。
50 IMO will continue to introduce and implement best practices in its activities, delivering efficient and effective processes to deal with the ever-changing work of the Organization, thereby ensuring that Member States, donors and other partners receive the best value for the resources they provide.	國際海事組織將繼續在其各項活動中引入和實施最佳實踐，提供高效的流程來應對本組織不斷變化的工作，從而確保成員國、捐助者和其他合作夥伴獲得其所提供資源的最佳價值。
51 The motivated and skilled staff who lie at the heart of the Organization's success are essential to its ability to respond effectively to changing demands. IMO will ensure that the Secretariat continues to be adequately staffed and equipped with the required competencies and is structured and supported appropriately to deliver the work of the Organization. IMO will continue to take steps to ensure inclusivity, such as in the areas of multilingualism, gender and geographical representation, including at all levels of the Secretariat. IMO will also strive to ensure equal access for all to actively participate in the work of the Organization.	積極進取、技能精湛的員工是本組織成功的核心，也是其有效應對不斷變化的需要的關鍵。國際海事組織將確保秘書處繼續配備充足的人員，並具備所需的能力，且其結構和支援措施適當，以進行本組織的工作。國際海事組織將繼續採取措施確保包容性，例如在多語制、性別平等和地理代表性等領域，包括在秘書處各級機構中。國際海事組織也將努力確保所有人都能平等地積極參與本組織的工作。
52 IMO will continue to manage and utilize its financial resources effectively, responsibly and sustainably. In this regard, the ongoing commitment of Member States to provide financial resources that meet the Organization's long-term expenditures, as well as ensuring adequate sources of funding for the Organization's activities with the support of other donors, are essential. In its technical cooperation work, IMO will endeavour to establish new and further develop existing strategic donor relationships and to optimize other sources of funding.	國際海事組織將繼續有效、負責和永續地管理和利用其財政資源。在這方面，成員國持續承諾提供滿足本組織長期支出的財政資源，並在其他捐助者的支持下確保本組織活動擁有充足的資金來源，這一點至關重要。在技術合作工作中，國際海事組織將努力建立新的策略捐助者關係，並進一步發展現有的策略性捐助者關係，同時優化其他資金來源。

績效指標	SD 8: Ensure organizational effectiveness	確保組織效能
PI 8.1	# and % of Member States, IGOs and NGOs attending IMO meetings, for each meeting	每場會議出席的 Member States/IGOs/NGOs 的人數與比例
PI 8.2	% of outputs completed by the original target completion date	依原定目標完成期限完成的 outputs 百分比
PI 8.3	% of technical cooperation and capacity development activities with effective results for the receiving Member States	技術合作與能力發展活動對受援國具有「有效成果」的百分比
PI 8.4	% of technical cooperation and capacity development activities with long-term impact for the receiving Member States	技術合作與能力發展活動具有「長期影響」的百分比

績效指標	SD 8: Ensure organizational effectiveness	確保組織效能
PI 8.5	% of the reporting requirements that can be met by electronic means	可用電子方式滿足的報告要求百分比
PI 8.6	% of vacant posts in general services and professional/higher categories	一般事務與專業/高階職缺的空缺率
PI 8.7	% of assessments received from Member States	會員國繳納款項到款比例
PI 8.8	% of biennial Integrated Technical Cooperation Programme (ITCP) funded	ITCP 兩年期整合技術合作計畫資金到位比例
PI 8.9	% contribution of Trading Fund surplus to the ITCP	I Trading Fund 盈餘對 ITCP 的貢獻比例
PI 8.10	% of additional external contributions to the budget	對預算的額外外部捐助比例
PI 8.11	% of contributions provided by substantial donations	以重大捐助提供之貢獻比例

Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ(s)
8.1	Endorsed proposals for the development, maintenance and enhancement of information systems and related guidance (GISIS, websites, etc.) 支持開發、維護和增強信息系統及相關指南(如 GISIS、網站等)的核准提案	Continuous	Council	MSC / MEPC / FAL / LEG / TCC	
8.2	Consideration of reports on the management of financial and human resources 審議關於財務和人力資源管理的報告	Continuous	Council		
8.3	Analysis and consideration of reports on partnership arrangements for, and implementation of, environmental programmes 分析和審議關於環境計畫夥伴安排及其執行情況的報告	Continuous	TCC	MEPC	
8.4	Analysis and consideration of reports on the TC Fund, voluntary trust funds, multi/bilateral funds, cash contributions and in-kind support under the ITCP 分析和審議關於技術合作基金(TC Fund)、自願信託基金、多邊/雙邊基金、現金捐助以及綜合技術合作計畫(ITCP)下的實物支持報告	Annual	TCC		
8.5	Analysis and consideration of reports on the implementation of the approved mechanism for sustainable financing of the ITCP 分析和審議關於 ITCP 可持續融資核准機制執行情況的報告	Annual	TCC		
8.6	Monitoring measures on new and cost-effective measures to deliver technical assistance 監測提供技術援助的新型且具成本效益措施的措施	Annual	TCC		
8.7	Approved TC annual report including ITCP implementation 核准的技術合作(TC)年度報告，包括 ITCP 執行情況	Annual	TCC		
8.8	Comprehensive, transparent, deliverable and adopted strategic plan, including associated documents, and results-based budget 全面、透明、可交付且通過的策略規劃，包括相關文件及基於結果的預算	Continuous	Assembly	Council	
8.9	Revised documents on organization and method of work and Rules of Procedure, as appropriate 視需要修訂關於組織與工作方法的文件及議事規則	Continuous	Council	MSC / MEPC / FAL / LEG / TCC	
8.10	Analysis and consideration of reports on implementation of resolution A.1167(32) on Revised Financing and partnership arrangements for an effective and sustainable ITCP 分析和審議關於執行第 A.1167(32)號決議的報告，該決議涉及為實現有效且可持續的 ITCP 而修訂的融資與夥伴關係安排	Annual	TCC		
8.11	Technical cooperation evaluation and reporting on the implementation of the recommendations 技術合作評估及建議執行情況的報告	Continuous	TCC		
8.12	Consideration for the enhancement and improvement of multilingualism and the	Continuous	Council	MSC / MEPC	

Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ(s)
	language services at IMO 考慮加強和改善 IMO 的多語制和語言服務			/ FAL / LEG / TCC	
8.13	Reports on the Organization's outreach activities 關於組織外聯活動的報告	Continuous	Council		
8.14	Endorsed proposals for new outputs as accepted by the Committees 委員會接受並核准的新產出提案	Continuous	Council	MSC / MEPC / FAL / LEG / TCC	
8.15	Cooperate with the United Nations on matters of mutual interest, as well as provide relevant input/guidance 就共同關切事項與聯合國合作，並提供相關意見與指引	Continuous	Assembly	MSC / MEPC / FAL / LEG / TCC / III	Council
8.16	Cooperate with other international bodies on matters of mutual interest, as well as provide relevant input / guidance 就共同關切事項與其他國際組織合作，並提供相關意見與指引	Continuous	Assembly	MSC / MEPC / FAL / LEG / TCC	Council
8.17	Approved accounts and audited financial reports 核准的帳目和經審計的財務報告	Continuous	Assembly	Council	
8.18	Review the Secretariat's Risk Management Exercise 審查秘書處之風險管理作業	Continuous	Council		
OW 1	Monitoring of South-South cooperation reflected in the ITCP and partnerships 監測綜合技術合作計畫(ITCP)和夥伴關係中反映的南南合作(South-South cooperation)情況	Continuous	TCC		
OW 4	Advice and guidance on issues under UNCLOS relevant to the role of the Organization 針對《聯合國海洋法公約》下與國際海事組織職能相關的議題提供建議與指導	Annual	LEG		
OW 5	Provide advice and guidance on issues brought to the Committee in connection with implementation of IMO instruments 針對提交至委員會、與 IMO 法律文書執行相關的議題提供建議與指導	Annual	LEG		
OW 6	Analysis and consideration of reports on strengthened regional associations for women managers in the maritime sector 分析與審議關於加強海事部門女性管理者地區協會的報告	Annual	TCC		
OW 7	Provide advice and guidance to support the availability of information on comprehensive national legislation and judicial capacity-building 提供建議與指導，以支持獲取全面的國家立法資訊及司法能力建設	Annual	LEG		

IMO 策略規劃的展望與思考

從 1981.11.20 年 A.500(XII)、1997.11.27 的 A.847(20)、1999.11.16 的 A.900(21)、2002.01.25 的 A.909(22)、2004.03.18 的 A.944(23)、2005.11.23 的 A.970(24)、2007.12.21 的 A.989(25)、2009.11.26 的 A.1011(26)、2011.12.21 的 A.1037(27)、2013.11.29 的 A.1060(28)、2015.12.01 的 A.1097(29)、2017.12.06 的 A.1110(30)、2021.12.15 的 A.1149(32)、2023.12.06 的 A.1173(33)、2025.12.03 的 A.1196(34)，經歷了 44 年，超過 16,084 天的時間，國際海事組織淬煉出的策略規劃不僅是國際海事組織內部工作的藍圖，更是引導全球航運業邁向更安全、更環保、更高效未來的戰略羅盤。從船舶設計、建造、營運到船員福祉，IMO 所制定的國際標準深刻影響著全球貿易的命脈。

早期的策略規劃精神主要關心的是理事會的協調角色與從標準制定到確保現有 IMO 標準與法規的有效且統一的執行(*effective uniform implementation*)。這些早期原則共同塑造了 IMO 強調實用性、關注成員國執行能力、並力求「避免過度監管(*avoiding excessive regulation*)」的組織文化。它要求任何新的公約或修正案都必須基於「明確且有充分文件證明的迫切需求(*clear and well-documented demonstration of compelling need*)」。隨著全球海事環境日益複雜，這些基礎原則也催生出一個更為系統化和前瞻性的現代策略框架，以更結構化的方式應對未來的挑戰。

從 2012-2017 年策略規劃到 2018-2023 年策略規劃的結構性轉變，清晰地揭示了 IMO 在策略規劃成熟度上的顯著提升，即從被動應對外部宏觀挑戰，轉向主動設定清晰、具前瞻性的組織發展方向。在此期間的策略規劃主要圍繞著提升安全管理標準、應對海事安全與保安的威脅、增強的環保意識、需要更有效地與其他聯合國機構和國際組織協作以處理複雜的跨領域議題等當時全球海事領域面臨的重大挑戰。

進入 2018-2023 年策略規劃，A.1149(32)號決議，IMO 首次引入了七個核心的「策略方向(*Strategic Directions, SDs*)」，將宏觀挑戰轉化為具體、可執行的組織目標，A.1173(33)號決議調整 2024-2029 年策略規劃為八個核心的「策略方向」。這一結構性的轉變標誌著 IMO 從一個主要「回應」外部挑戰的組織，演變為一個「主動設定」議程的全球治理平台。其革命性在於，這些明確的策略方向首次具體的將「產出(*Outputs*)」和「績效指標(*Performance Indicators, PIs*)」直接銜接，建立了一個在 2012-2017 年策略規劃中所缺乏的、可追溯、可衡量的問責制與成果導向管理框架。特別值得一提的是依據 2024.05.03 技術委員會 74 次會議文件 TC 74/6/1 (The Capacity-Building Decade 2021-2030 Strategy)，為落實 SD 8: Ensure organizational effectiveness(確保組織效能)的運作，IMO 在 2024 年進行了重大重組，將技術合作司(*Technical Cooperation Division, TCD*)、合作夥伴部(*Department of Partnerships and Projects, DPP*)與成員國稽核部(*Department of Member State Audit and Implementation Support, DMSAIS*)合併為「技術合作與執行司(*Technical Cooperation and Implementation Division, TCID*)」。

在 2024-2029 年策略規劃中反映了 IMO 對全球海事議題的動態調整，更揭示了其在核心使命上的不斷成熟與擴展，包括：

- 從技術援助到能力發展的確保全球標準一致性：「執行(*Implementation*)」始終是 IMO 策略的基石，但其內涵已從單純的監督轉變為深度的夥伴關係。最初的策略方向 SD 1 聚焦於「改善執行」，而 2024-2029 年的策略規劃(A 33/8(a)/Add.1)則將其深化為「確保 IMO 文書的執行並以能力發展為支持(*Ensure implementation of IMO instruments supported by capacity development*)」。這一轉變的關鍵催化劑是 A.1166(32) Capacity-Building Decade 2021-2030

Strategy 的推出，其後續更演變為更全面的 A.1205(34)「能力發展 (Capacity Development)」概念。根據 TC 73-6-2 文件的闡述，這一演進代表了 IMO 支持模式的根本性轉型，是為了與聯合國系統接軌，強調「內生、動態且建立在既有基礎上」的變革。傳統的「能力建設 (Capacity-building)」被視為在「一張白紙 (a plain surface)」上從零開始構建，而「能力發展 (Capacity development)」則是一種更現代、更具尊重性的方法，它強調支持是「由內而外驅動的 (driven from the inside)」，並「建立在現有的技能和知識基礎上」。這意味著 IMO 的角色從單純的援助提供者，轉變為與成員國(特別是小島嶼發展中國家 SIDS 和最低度開發國家 LDCs)的協作夥伴。此新模式的核心原則包括「本地所有權 (local ownership)」、「捐助方與本地利益相關者之間的夥伴關係(partnerships between donors and local stakeholders)」，以及追求「長期的可持續變革(sustainable change over a period of time)」。這一演進確保了全球航運業的「公平競爭環境 (level playing field)」，避免因部分國家治理能力不足而導致全球標準出現缺口。

- 從跟進到引領的應對技術革新：舉例而言，SD 2 的措辭從 2018-2023 年整合「新興與先進技術(new and advancing technologies)」到 2024-2029 年的整合「新的、新興的與先進的技術(new, emerging and advancing technologies)」。增加「新興的 (emerging)」一詞，雖屬細微調整，卻反映出 IMO 意圖更早地介入技術發展初期階段，在技術尚未完全成熟時就開始研究其監管框架，而非等待技術普及後再被動應對。一個具體的例證是，IMO 已將「制定海上水面自主船舶 (MASS) 的目標導向文書」列為其具體產出 (Output 2.23, A 33/8(a)/Add.1)。這表明 IMO 正在積極為航運業的自動化和數位化浪潮建立前瞻性的全球監管框架。
- 從責任到核心使命的環境保護與氣候應對：環境議題在 IMO 策略中的地位持續提升。2018-2023 年策略規劃(A 32/9(a))中設立的 SD 3「應對氣候變遷」，明確將《巴黎協定》等全球氣候議程納入 IMO 的核心策略。這不僅是口號，更轉化為一系列具體的、可執行的航運法規和技術標準。相關的具體產出 (Outputs)包括：制定全面的 IMO 溫室氣體減排策略、減少國際航運排放的黑碳對北極的影響、修訂船舶能效設計指數(EEDI)和船舶能效管理計畫(SEEMP)的相關指南、推動提高國際航運能效的進一步技術和營運措施等。
- 從安全考量到福祉關懷的升級「人的因素」：策略方向 SD 6「處理人的因素」的內涵經歷了顯著的擴展，從傳統的安全視角提升至全面的人文關懷。初期，該方向的重點主要在於減少航行安全和環境保護中的人為失誤。然而，這種擴展並非一蹴可幾。2024-2029 年策略規劃的總體原則(A 33/8(a)/Add.1)已為此

奠定基礎，強調了「尊重、不歧視、包容性」等原則。在此基礎上，2026-2027 年的工作計畫 (A 34/8(a)) 進一步將「人的因素」範疇大幅擴展，首次明確納入了：「促進海員的公平待遇、性別平等和婦女賦權，並解決海員被遺棄、霸凌和騷擾(包括性攻擊和性騷擾)等問題。」這一轉變表明 IMO 的職責不僅僅是保障船舶和海洋的安全，更延伸至保護在海上工作的每一個人的尊嚴與福祉。這極大提升了 IMO 作為一個全球性組織的人文關懷形象和社會責任感，使其與聯合國更廣泛的可持續發展目標保持高度一致。

一個有效的策略不僅需要前瞻性的內容，更需要強大的制度流程和透明的治理結構來保障其實施。近年來，IMO 在策略規劃的執行機制與組織治理方面進行了深刻改革，使其決策過程更加制度化、精細化和透明化。根據由 A.1174(33)號決議建立、後由 A.1197(34)號決議更新的框架，IMO 建立了一套嚴謹的 2024-2029 策略應用流程，其關鍵特徵如下：

- 週期性規劃：確立了「六年一次的策略規劃」與「兩年一次的產出清單更新」的週期性機制。這種結構確保了組織既有長期策略方向，又能靈活應對短期變化。
- 嚴格的產出提案流程：任何成員國或組織若要提出新的工作項目(即「產出」)，都必須提交一份詳盡的提案，內容需包括：問題分析、需求證明、影響評估、以及符合 SMART(具體 Specific、可衡量 Measurable、可實現 Achievable、相關 Relevant、有時限 Time-bound)原則的目標。
- 多維度評估：所有提案都必須經過強制性的清單評估，特別是針對「人的因素」和「能力建設需求」的影響。這確保了 IMO 在制定任何新規則時，都會系統性地考慮其對船員及發展中國家執行能力的挑戰。
- 資源與預算掛鉤：所有被納入工作計畫的產出都必須與雙年度預算嚴格掛鉤。這一原則確保了策略的務實性和可行性，避免了資源分散或目標好高騷遠的問題。

作為結論，國際海事組織的策略規劃在過去數十年間完成了多次深刻的轉型。它已從一個以制定技術標準為主的傳統國際監管機構，成功演變為一個具備前瞻性、流程化、資訊與數據驅動且日益透明的全球海事治理平台。這一演進的關鍵特徵清晰可見：

- 策略的清晰化：從應對宏觀挑戰轉向設立明確的「策略方向」，為組織工作提供了清晰的指引。
- 議題的深化：在環保、人的因素等核心議題上，其內涵不斷擴展，從傳統的安全考量延伸至氣候應對和船員福祉的全面關懷。
- 流程的制度化：建立了一套嚴謹、透明的規劃與評估流程，確保所有決策都與策略目標、可用資源和潛在影響緊密掛鉤。
- 治理的現代化：透過會議直播、文件公開等改革措施，提升了組織的透明度和公信力，展現了現代化治理的風範。

總體而言，這種演進不僅是對過去挑戰的有效回應，更是 IMO 為應對未來航運業在深度脫碳、全面數位化、地緣政治風險所做的前瞻性策略準備。通過這場深刻的自我革新，IMO 正在鞏固其在全球海事事務中的核心領導地位，確保在未來數十年中，能繼續引領全球航運業應對未知挑戰，駛向可持續的未來。

後記 - 海不會遵守規則，但人必須

人類從來不是在平靜之中建立航運秩序的。

海洋不承諾安全，氣候不保證穩定，風浪、暗流與黑夜從未因任何公約而退讓一步。正因如此，航運文明才一再試圖以規則、技術與制度，回應那片無法被馴服的藍色深淵。

今日我們所談論的脫碳、減排與替代能源，表面上是能源結構的調整，實質上卻是人類首次嘗試在全球尺度上，對自身行為的後果負起長期責任。氣候變遷並非單一世代的過失，而是一段文明累積的結果；而國際航運，恰恰是這段歷史最忠實、也最沉默的見證者。

當船舶逐漸轉向低與零排放燃料，當航行決策開始交由演算法與遠端系統輔助，當海上自動化水面船舶(MASS)模糊了「船員在船上」這一古老前提，人類其實正在重新定義自己在海上的位置。數位化與網路安全的議題提醒我們，風險不再只來自自然，而來自我們自己所創造的系統。科技愈精密，責任愈不能被抽象化。

在地緣政治緊張、制裁與衝突蔓延至航線與港口的時代，航運再次顯露其脆弱性。海上保安、安全與供應鏈韌性，已不只是產業管理問題，而是文明能否維持基本互信的試金石。國際海事治理所面對的，已不僅是「如何制定更好的規則」，而是「在分裂的世界中，是否仍可能維持共同的底線」。

然而，所有制度設計最終都必須回到人。

在自動化與能源轉型的浪潮中，海員是否仍被視為具尊嚴的勞動者，而非可被替換的風險變數？在效率與合規的壓力之下，人是否仍被允許疲憊、學習、犯錯，並被公平對待？這些問題，無法僅靠指標或審核回答，卻決定了一個制度是否仍具道德重量。也因此，理解國際海事組織當代策略規劃的意義，不在於它是否足夠前瞻，而在於它是否仍記得自身的出發點：不是控制海洋，而是在不可控制之中，為人類行為劃出一條最低限度的自律之線。

海不會遵守規則。但正因如此，人必須。

在所有公約、策略與指標之後，真正被衡量的，從來不是船舶或制度，而是人類是否仍願意承認自身的有限，並在浩瀚之中，選擇對彼此、對海洋、對未來負責。

在風浪之前，人當學會謙卑；在規則之後，人仍須選擇善良。

海從不因人而溫柔，歷史亦然；唯有責任，能使人不至迷失。