Analysis of IMarEST Membership Consultation: IMO 2023 GHG Strategy

Executive Summary

The consultation captured 37 responses across five sectors:

Sector	Respondents	Share
Ship Management	15	41%
Consultancy	10	27%
Classification	6	16%
Academia	4	11%
Equipment Makers	2	5%
Total	**37**	**100%**

Based on weighting by respondent population, the consultation reveals several clear messages from the participating membership.

Most significant findings

1. **Members broadly support the IMO 2023 GHG Strategy objectives but question whether current measures alone are sufficient to deliver net zero by 2050.** Support for the destination is stronger than confidence in the current implementation pathway.
2. **The strongest cross-sector message is the need for long-term regulatory certainty.** Respondents consistently identify policy instability, uncertainty regarding future fuel pathways, uncertainty over carbon-pricing mechanisms, and uncertainty surrounding infrastructure deployment as the principal barriers to investment. Approximately 95% of respondents are represented by sectors identifying regulatory certainty as a major enabler.
3. **Operational efficiency remains the most immediately available decarbonisation opportunity.** Voyage optimisation, speed optimisation, Just-in-Time (JIT) arrival and digital performance monitoring attract support across every sector.
4. **CII is viewed as awareness-raising rather than transformational.** While respondents acknowledge that it has increased focus on operational efficiency, many believe the framework places responsibility primarily on the vessel while emissions performance is also heavily influenced by chartering decisions, port efficiency and wider supply-chain factors. Consequently, respondents questioned whether CII, in its current form, can sufficiently incentivise change across the broader maritime value chain.
5. **SEEMP is widely considered a compliance framework rather than an active management tool.** A common recommendation is to transform SEEMP into a performance-management system supported by KPIs, digital monitoring and management accountability.
6. **There is no support for a single future fuel solution.** The dominant strategic position is a technology-neutral, multi-pathway transition incorporating methanol, ammonia, biofuels, batteries, hydrogen and wind-assisted propulsion according to trade and vessel type.
7. **Infrastructure readiness is now perceived as an equal or greater risk than technology readiness.** Respondents repeatedly identify fuel production, bunkering infrastructure, shore power and grid development as critical constraints.
8. **Commercial incentives are fundamentally misaligned.** Across multiple sectors respondents describe a "split incentive" problem where owners invest, charterers influence operations, ports create delays and ship operators bear regulatory penalties.
9. **A just and equitable transition is viewed as essential.** Strong support exists for technology transfer, training, financing mechanisms and infrastructure assistance for developing economies.

10. **Several minority views deserve attention despite low prevalence.** Support for nuclear propulsion, onboard carbon capture and stronger market-based measures appears limited numerically but potentially significant strategically.

Consultation Profile

Respondent Distribution

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Weighting Methodology

All findings have been assessed in direct proportion to sector representation within the consultation.

Consequently:

- Operational perspectives from Ship Management carry the greatest influence.
- Consultancy and Classification views materially affect overall findings.
- Equipment Maker findings are treated cautiously due to their small sample size.
- Distinctive minority views are recognised separately from weighted consensus.

Limitations

- The sample size is modest (37 respondents).
- Respondents are self-selecting and should not be treated as statistically representative of the entire membership.
- Sector responses were analysed from consolidated summaries rather than raw survey records.
- Absence of disagreement should not be interpreted as demonstrated consensus.

Key Findings

1. Assessment of Existing IMO Measures

Carbon Intensity Indicator (CII)

Assessment	Consultation Finding
Positive impacts	Increased awareness; efficiency discussions; greater monitoring; investment in efficiency technologies
Main limitation	Weak correlation with actual operational efficiency
Strongest criticism	Penalises ships for factors beyond ship control
Common recommendation	Expand accountability beyond vessel operators

A clear majority of the consultation, representing all major sectors, believes CII has successfully drawn attention to emissions performance but is not yet driving optimal behaviour.

The most persistent criticism concerns:

- port congestion;
- anchorage waiting;
- charter-party requirements;
- commercial schedules.

These are viewed as significant drivers of emissions performance that remain largely outside the operator's control.

Significance

This is strategically important because it challenges a core assumption underlying current vessel-centric regulatory design.

Ship Energy Efficiency Management Plan (SEEMP)

The consultation reveals consistently stronger support for SEEMP than for CII.

However, respondents from all major sectors describe a similar weakness:

"SEEMP is often a compliance exercise rather than a management tool."

Most common recommendations:

- KPI-driven management;
- automated reporting;
- digital monitoring;
- benchmarking;
- management accountability;
- continuous improvement cycle

2. Most Effective Near-Term Measures

Strong consensus exists around four measures.

Measure	Strength of Support	Cross-Sector Consensus
Just-in-Time Arrival	Very High	Yes
Speed Optimisation	Very High	Yes
Voyage Optimisation	Very High	Yes
Digital Monitoring	High	Yes

These measures are attractive because:

- existing technology exists;
- implementation is relatively rapid;
- capital requirements are modest;
- benefits are measurable.

Particularly Significant Observation

Respondents repeatedly argue that:

The largest emissions reductions available in the next decade may come from improving existing operations rather than waiting for future fuels.

This finding emerged across ship management, consultancy, classification and academia.

3. Investment Confidence

High Confidence Areas

Strong confidence exists in:

- digitalisation;
- monitoring systems;
- hull optimisation;
- energy-saving technologies;
- operational efficiency measures.

Low Confidence Areas

Consistent concerns exist regarding:

- alternative fuel vessels;
- fuel production;
- bunkering infrastructure;
- future fuel prices;
- carbon pricing frameworks.

Weighted Conclusion

The consultation suggests that technology readiness is not the primary investment barrier.

The principal barriers are:

1. regulatory uncertainty;
2. infrastructure uncertainty;
3. fuel availability uncertainty.

4. Future Fuel Pathways

Consultation-Wide Position

The strongest overall position is:

No single fuel pathway will achieve maritime decarbonisation.

Relative Support

Pathway	Consultation Assessment
Multi-pathway approach	Strongest support
Green Methanol	Strong support
Green Ammonia	Strong support
Biofuels	Strong support as transition solution
Wind-assist	Strong support
Batteries	Sector-specific support
Hydrogen	Strategic support
Renewable methane	Moderate support
Nuclear	Significant minority support

Important Minority Perspective

Several respondents strongly advocate nuclear propulsion because of energy density and scalability.

This is a small minority position but potentially important because it highlights concern that some decarbonisation pathways remain politically constrained despite technical merit.

Consensus and Divergence

Areas of Strong Agreement

Issue	Level of Agreement
Regulatory certainty required	Very strong
Operational efficiency opportunities remain underexploited	Very strong
Infrastructure development must accelerate	Very strong
Multi-pathway fuel transition required	Strong
Incentives are misaligned	Very strong
Developing economies require support	Strong

These themes appear across sectors representing over 90% of respondents.

Areas of Disagreement

Market-Based Measures

Academics and consultants more frequently favour:

- carbon pricing;
- levies;
- stronger economic instruments.

Operators place greater emphasis on operational and practical implementation issues.

Future Technology Priorities

Equipment manufacturers strongly emphasise:

- wind-assisted propulsion;
- efficiency technologies.

Ship operators place relatively more emphasis on:

- fuel availability;
- infrastructure deployment.

Short-Term vs Long-Term Focus

Sector	Primary Focus
Ship Management	Practical implementation
Consultancy	Policy architecture
Classification	System effectiveness
Academia	Long-term governance
Equipment Makers	Technology adoption

Policy Implications for the IMO GHG Strategy

Measures Members Believe Should Be Strengthened

Strengthen CII

Potential reforms include:

- account for waiting time;
- account for port congestion;
- recognise operational context;
- improve transport work calculations;
- recognise value-chain responsibility.

Strengthen SEEMP

Move towards:

- active performance management;
- KPI led implementation;
- digital verification;
- management accountability frameworks.

Accelerate Infrastructure Development

Support:

- fuel production;
- bunkering;
- port readiness;
- shore power;
- grid capacity.

Expand Economic Signals

Many respondents see stronger economic mechanisms as necessary to complement technical measures.

Prioritised Recommendations for IMarEST Policy Engagement

Immediate Priorities

Recommendation	Evidence Strength	Objective
Advocate refinement of CII to better reflect operational realities	Very Strong	Improve credibility and effectiveness
Advocate whole-value-chain accountability	Very Strong	Align incentives
Support accelerated JIT implementation	Very Strong	Immediate emission reductions
Promote digital performance management through SEEMP	Strong	Improve operational performance
Support technology-neutral decarbonisation pathways	Strong	Prevent premature lock-in

Proposed Engagement

- IMO submissions
- ISWG-GHG engagement
- technical position papers
- expert workshops
- chartering and port stakeholder engagement

Medium-Term Priorities

Recommendation	Rationale
Support global fuel infrastructure development	Major barrier identified
Develop evidence on incentives and responsibility-sharing	Cross-sector concern
Advance lifecycle GHG assessment methodologies	Strong support for technology neutrality
Promote competence and training standards	Strong academic finding

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Long-Term Priorities

Recommendation	Rationale
Advocate predictable long-term regulatory frameworks	Strongest recurring theme
Support equitable transition mechanisms	Broad global concern
Maintain evidence-led evaluation of emerging technologies	Avoid technology lock-in
Continue assessment of nuclear and carbon capture pathways	Important minority perspectives

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Evidence Gaps and Next Steps

The consultation identifies several areas where evidence remains insufficient for a definitive IMarEST position:

Future Fuel Prioritisation

Members support multiple pathways, but insufficient evidence exists to prioritise one pathway over another. Further technical evaluation is warranted.

Economic Measures

Support exists for market-based measures, but evidence is insufficient to establish preferred designs for levies, credit systems or reward mechanisms.

Nuclear Propulsion

Interest exists but is limited in respondent numbers. Further technical, regulatory and safety assessment would be required before advocating a formal position.

Carbon Capture

Raised by several respondents but not explored in sufficient depth to support a policy recommendation.

Overall Conclusion

The consultation strongly suggests that IMarEST members regard the IMO 2023 GHG Strategy as **necessary and directionally correct, but not yet sufficient on its own to guarantee delivery of net-zero shipping by or around 2050**.

The weighted consultation evidence points towards five institutional positions that are likely to command broad member support:

1. Strengthen implementation rather than fundamentally rewrite the strategy.
2. Improve CII and SEEMP so they drive genuine operational outcomes.
3. Accelerate operational efficiency measures that can deliver emissions reductions today.
4. Maintain technology neutrality while accelerating fuel and infrastructure readiness.
5. Provide stable, globally consistent regulation that gives industry confidence to invest.

Most importantly, respondents consistently argue that decarbonisation can no longer be treated as a vessel-only challenge. Achieving net zero will require coordinated action across the entire maritime value chain, including shipowners, operators, charterers, ports, fuel suppliers, financiers and regulators. This is the clearest and most compelling consultation-wide message for IMarEST's future engagement with the IMO.