

A light gray world map is centered in the background. Two dark blue parallelogram shapes are positioned on the left and right sides of the title text.

IMO Net-Zero Framework: Latest Progress in International Mechanisms for Reducing Greenhouse Gas Emissions from Ships

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27th March 2025 · Singapore



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IMO regulatory framework for decarbonization

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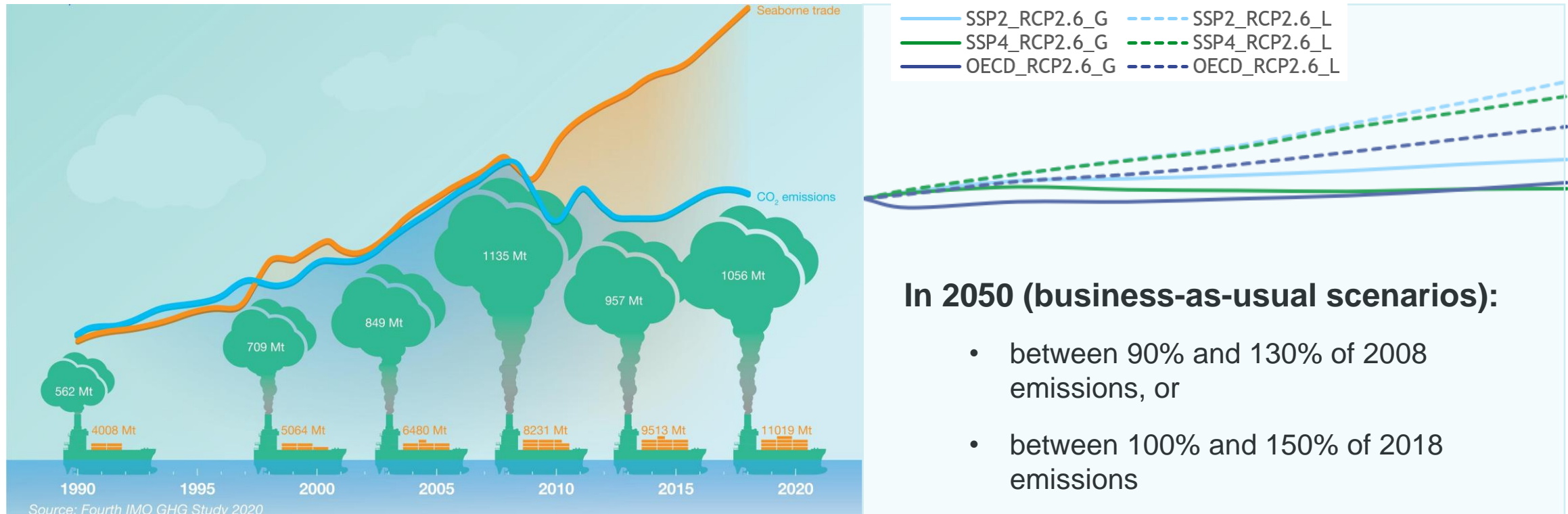
Maritime Energy transition driven by policy



Part 1

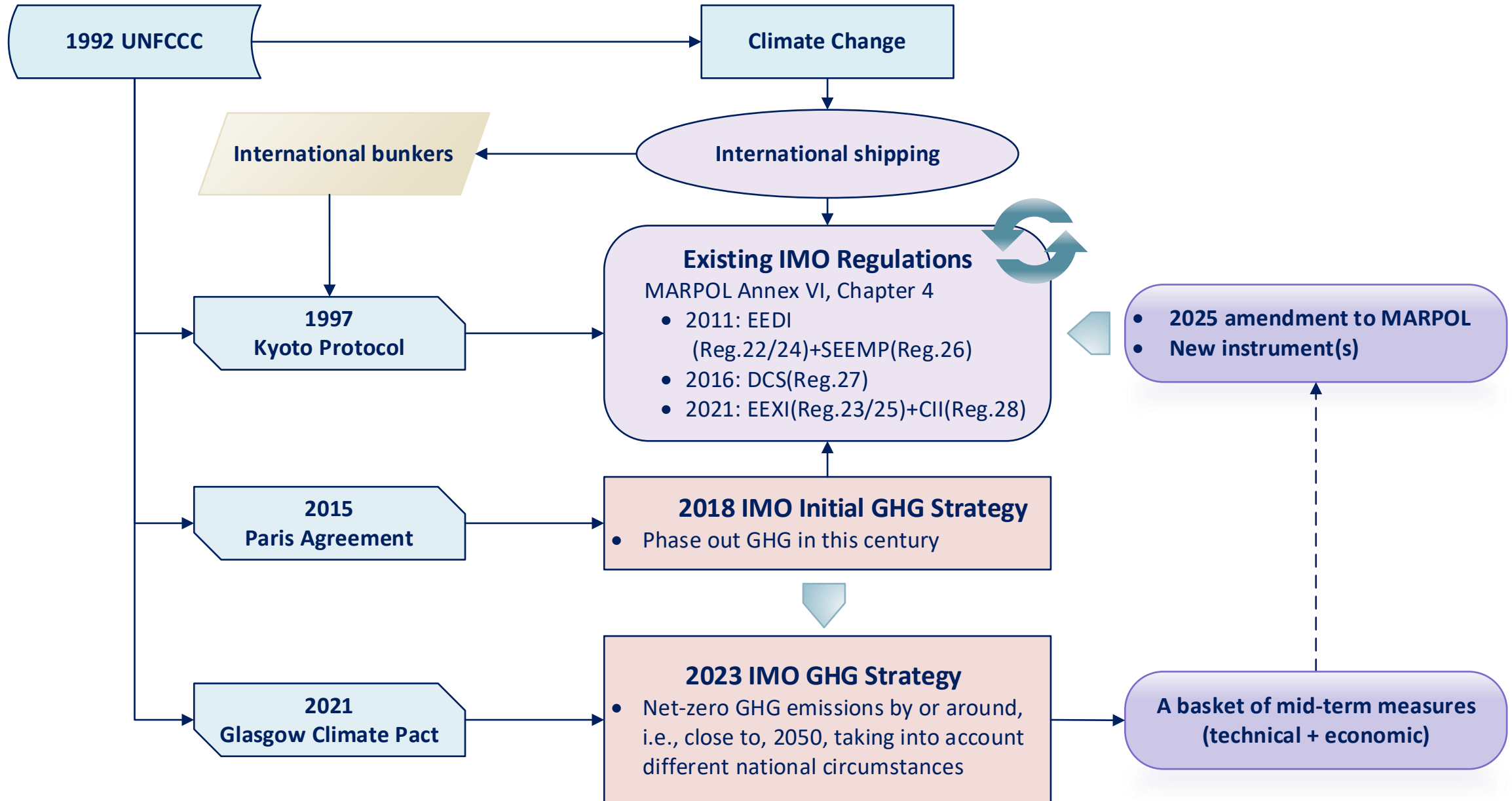
IMO regulatory framework for decarbonization

CO₂ Emissions from total shipping (1990-2020) and predictions for 2050



- ❑ Since 2009, growth in CO₂ emissions from maritime transport has been decoupled from the continuous increase in seaborne trade volume.
- ❑ In 2018, CO₂ emissions
 - total shipping: 1,056 million tonnes, 2.89% of global total
 - International shipping: 740 million tonnes, 2.00% of global total

Cutting GHG emissions from shipping - 10 years of IMO mandatory rules





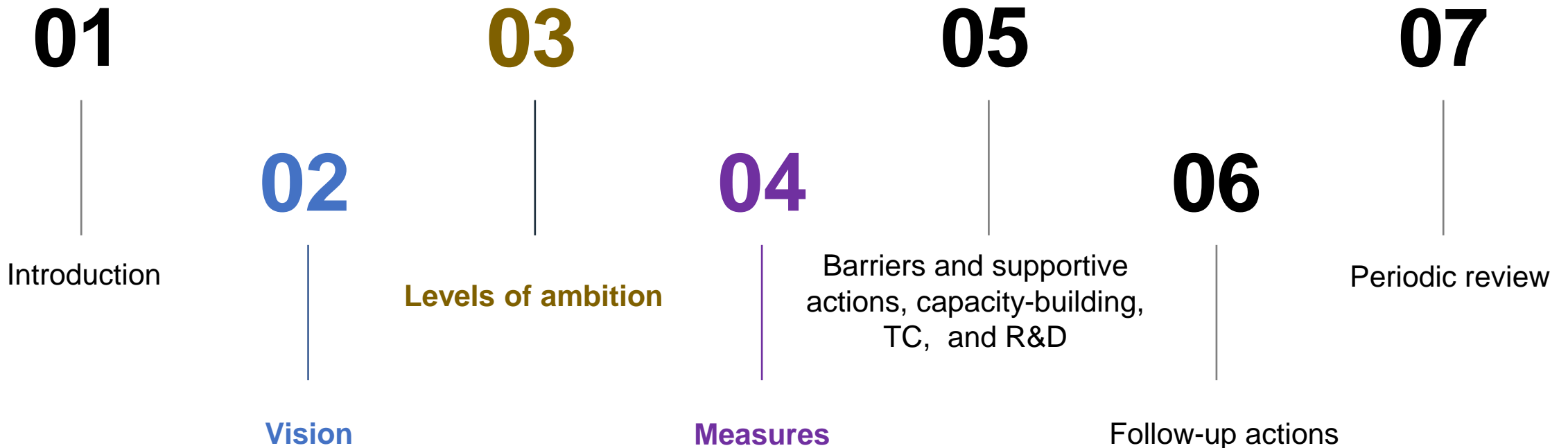
Part 2

Overview of 2023 IMO GHG Strategy

2023 IMO Strategy on Reduction of GHG Emissions from Ships, adopted at MEPC80

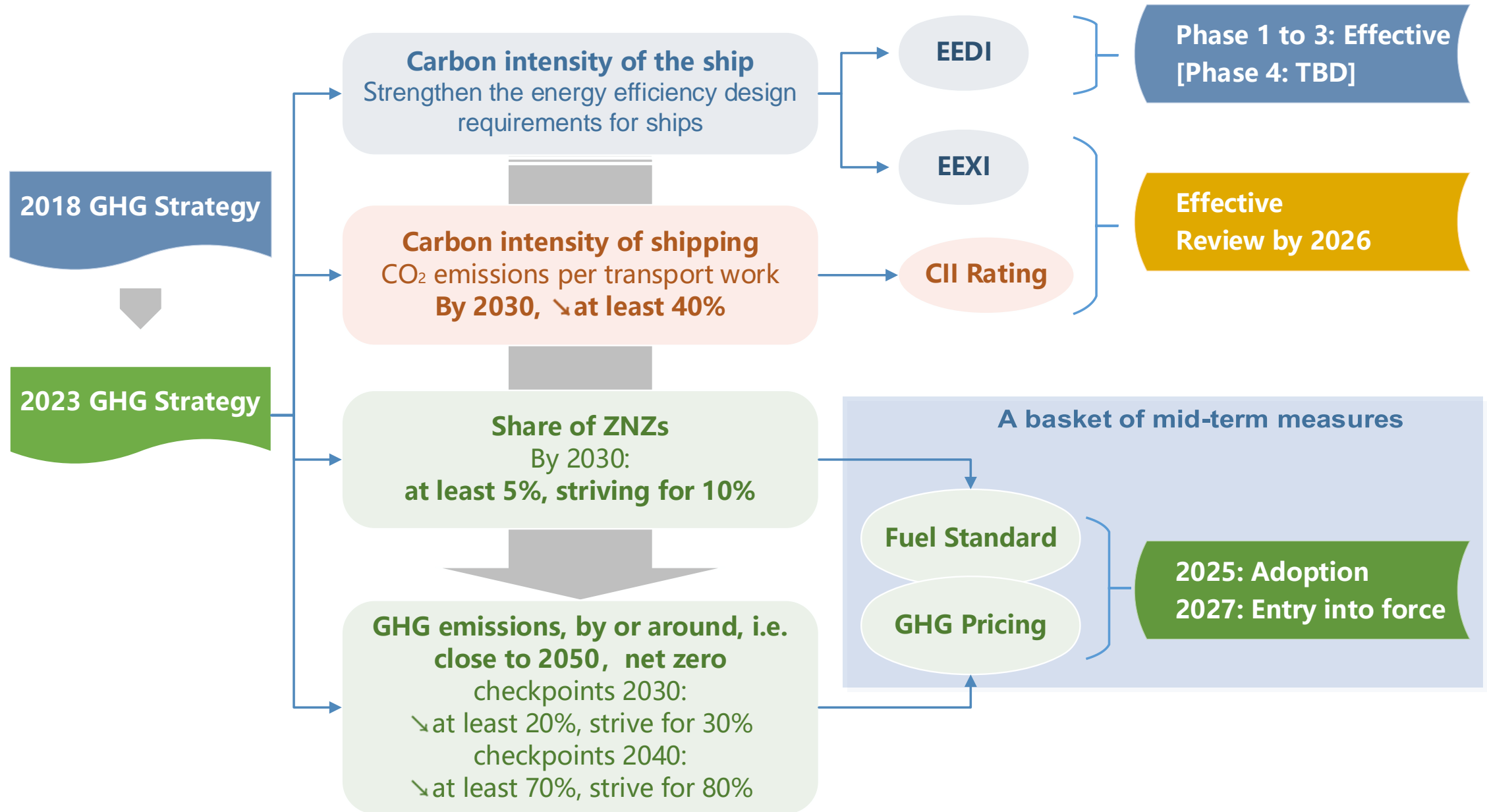


2023 IMO Strategy on Reduction of GHG Emissions from Ships



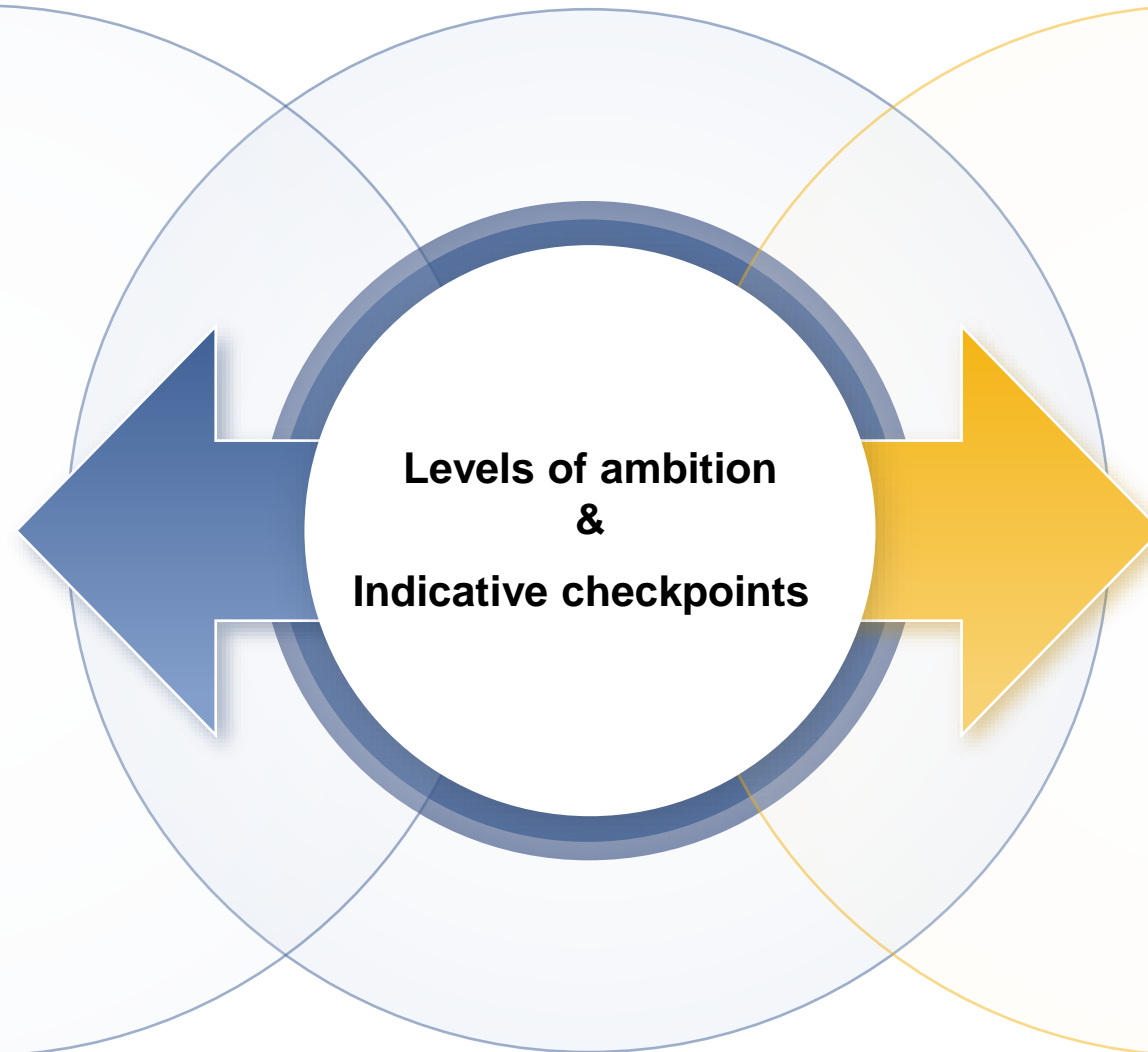
- ❖ Appendix 1 Overview of previous work to address GHG emissions from ships
- ❖ Appendix 2 Overview of relevant initiatives supporting the reduction of GHG emissions from ships

Ambition levels, indicative checkpoints and corresponding measures



Pathway

- **Technological innovation**
- Global introduction and availability of **zero or near-zero** GHG emission **technologies, fuels** and/or **energy sources**



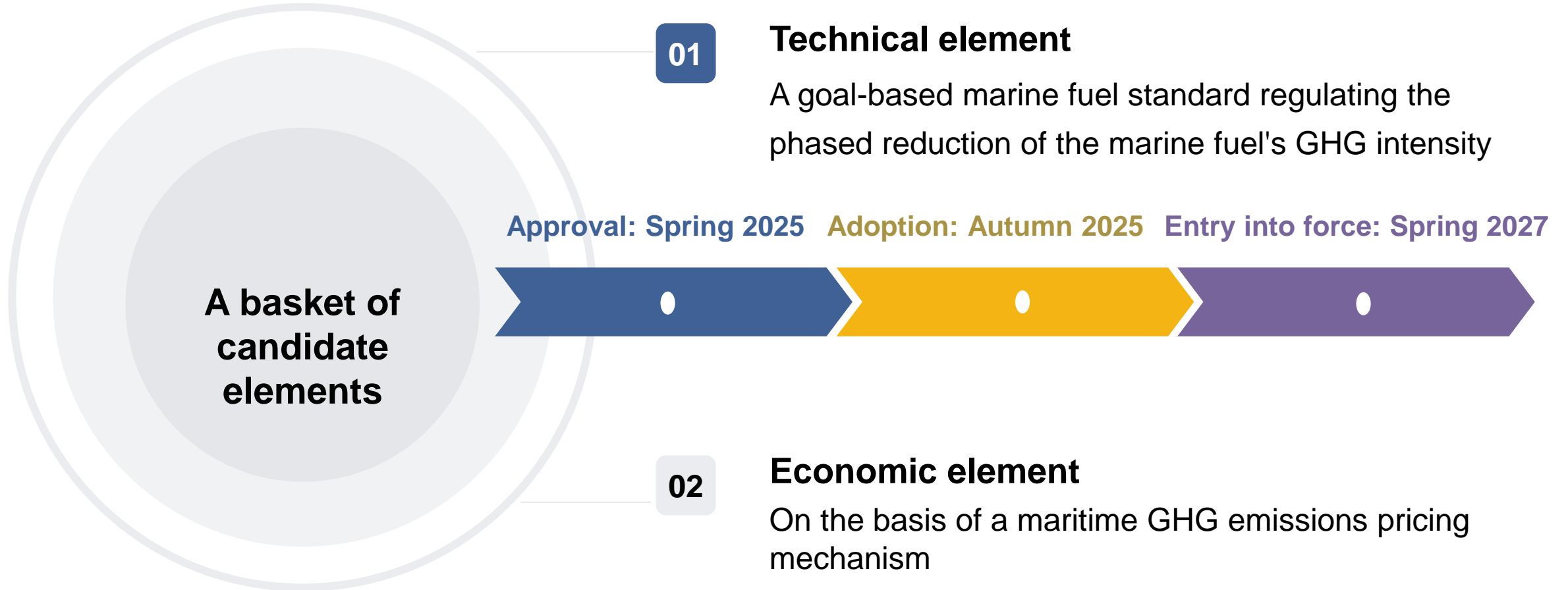
Boundary

- **Take into account WtW GHG** emissions of marine fuels as addressed in **LCA guidelines**
- Reduce GHG emissions within the **boundaries of the energy system of international shipping**



Part 3

A basket of mid-term GHG reduction measures



Draft possible outline of the IMO net-zero framework



Possible amendments to MARPOL Annex VI

Chapter 1 – General

- .1 Definitions (regulation 2)

Chapter 2 – Survey, certification and means of control

- .2 Surveys (regulation 5)
- .3 Certificates and Statements of Compliance (regulation 6)
- .4 Form of certificates and Statements of Compliance (regulation 8)
- .5 Duration and validity of Certificates and Statements of Compliance (regulation 9)
- .6 Port State control (regulation 10)

Chapter 4 – Regulations on the carbon intensity of international shipping

- .7 SEEMP (regulation 26)
- .8 Data Collection System (regulation 27)

[New Chapter 5 – Regulations on the IMO net-zero framework]

- .9 **New Chapter 5.1: Goal-based marine fuel standard regulating the phased reduction of the marine fuel's GHG intensity**
 - .1 Application (regulation X)
 - .2 Goal (regulation X)
 - .3 Functional requirements (regulation X)
 - .4 Attained GHG fuel intensity (GFI) (regulation X)
 - .5 Target/Required GFI (regulation X)
 - .6 GFI data collection and reporting (regulation X)
 - .7 Alternative compliance approaches (regulation X)
 - .8 Central GFI Registry (regulation X)

MEPC 81/16/Add.1
Annex 12, page 2

.10 **New Chapter 5.2: Economic mechanism(s) to incentivize the transition to net-zero**

- .1 Application (regulation X)
- .2 Calculation of economic contribution by ships (regulation X)
- .3 Collection of economic contribution by ships (regulation X)
- .4 Flexible compliance mechanism(s) (regulation X)
- .5 Central management/oversight of collected revenue (regulation X)
- .6 Distribution of revenue (regulation X)

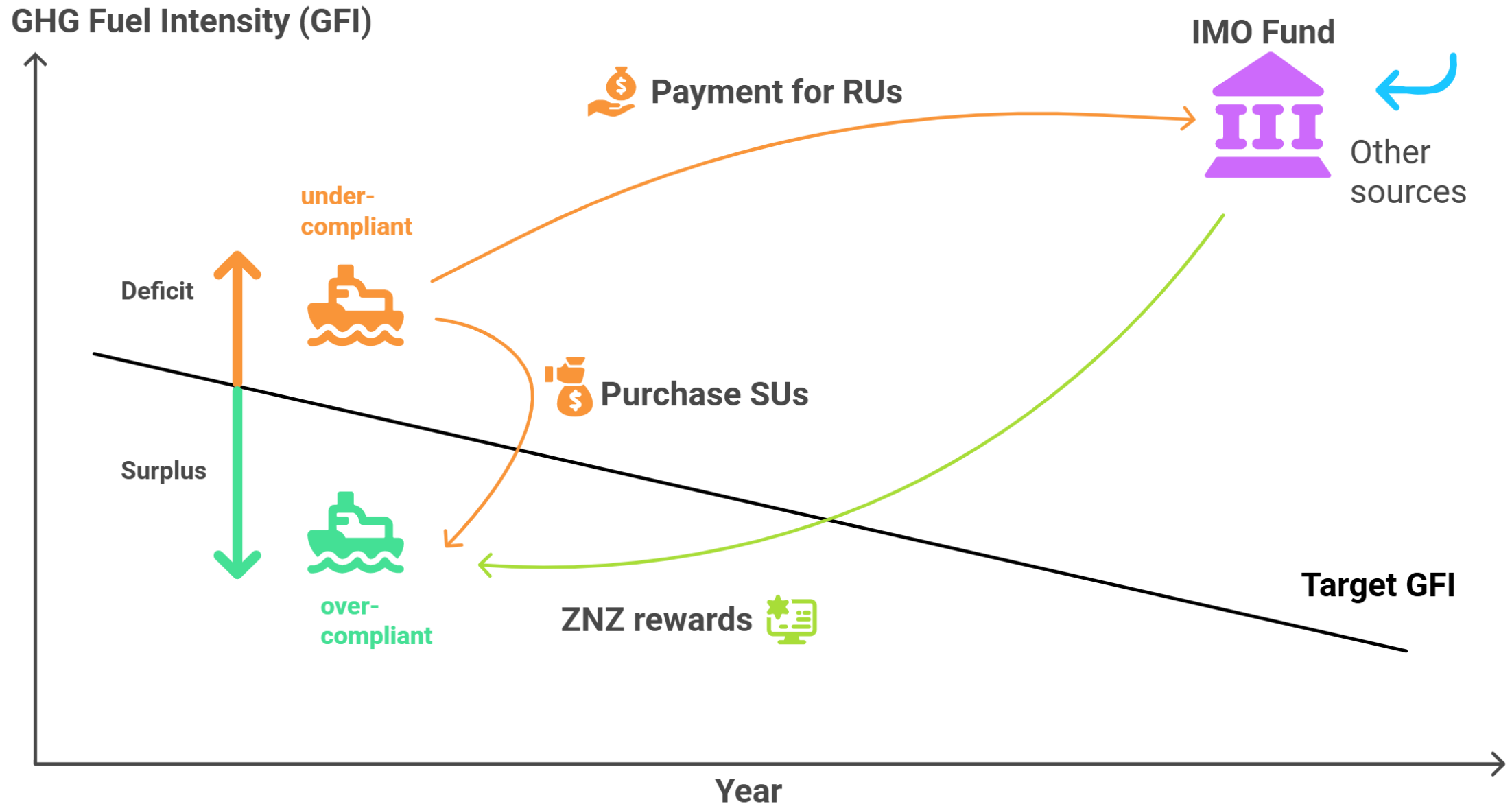
.11 **Review of the chapter]**

Appendices

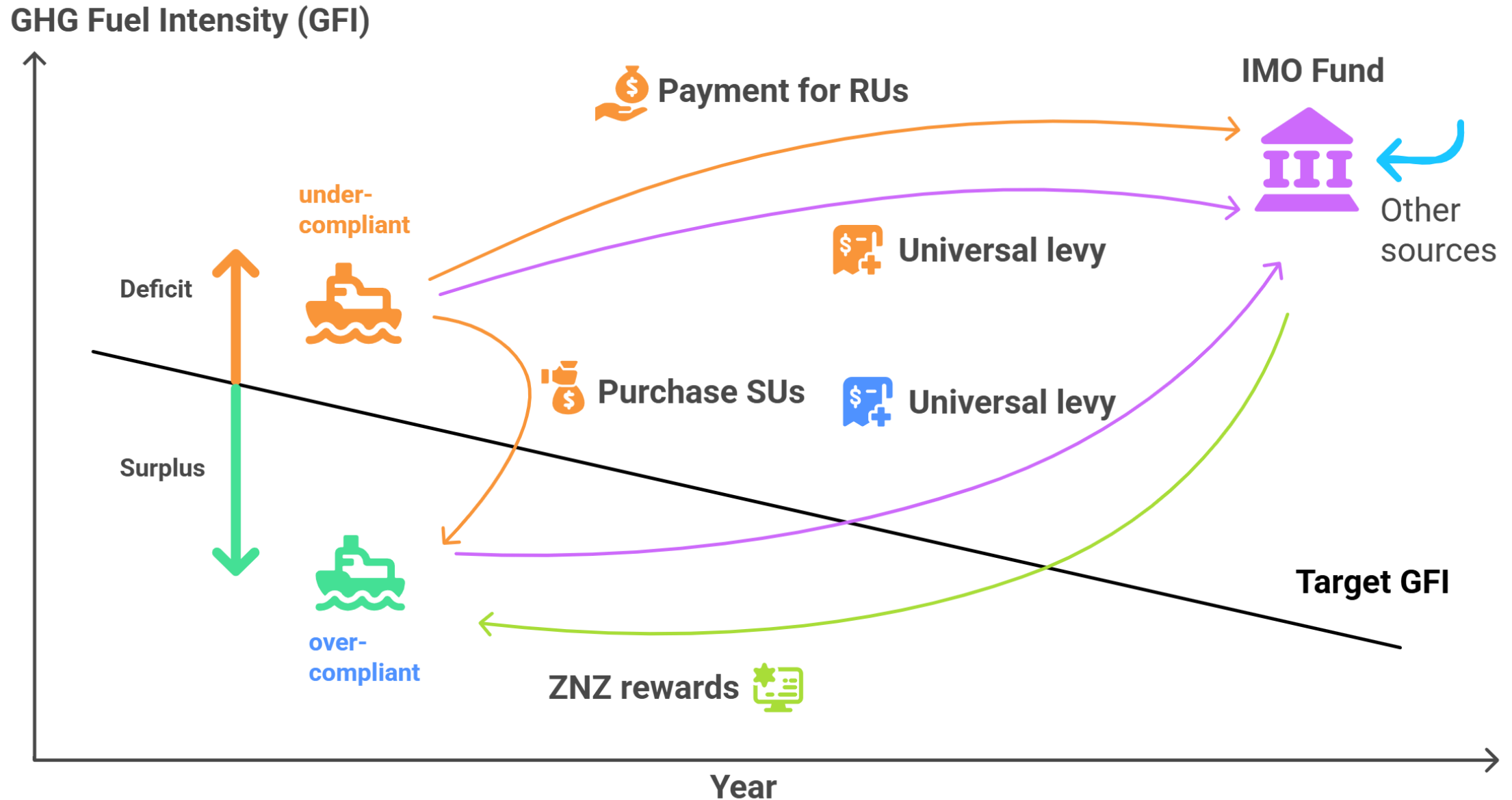
- .1 Appendix V (BDN)
- .2 Appendix IX (DCS)
- .3 Appendix X (Statement of Compliance)

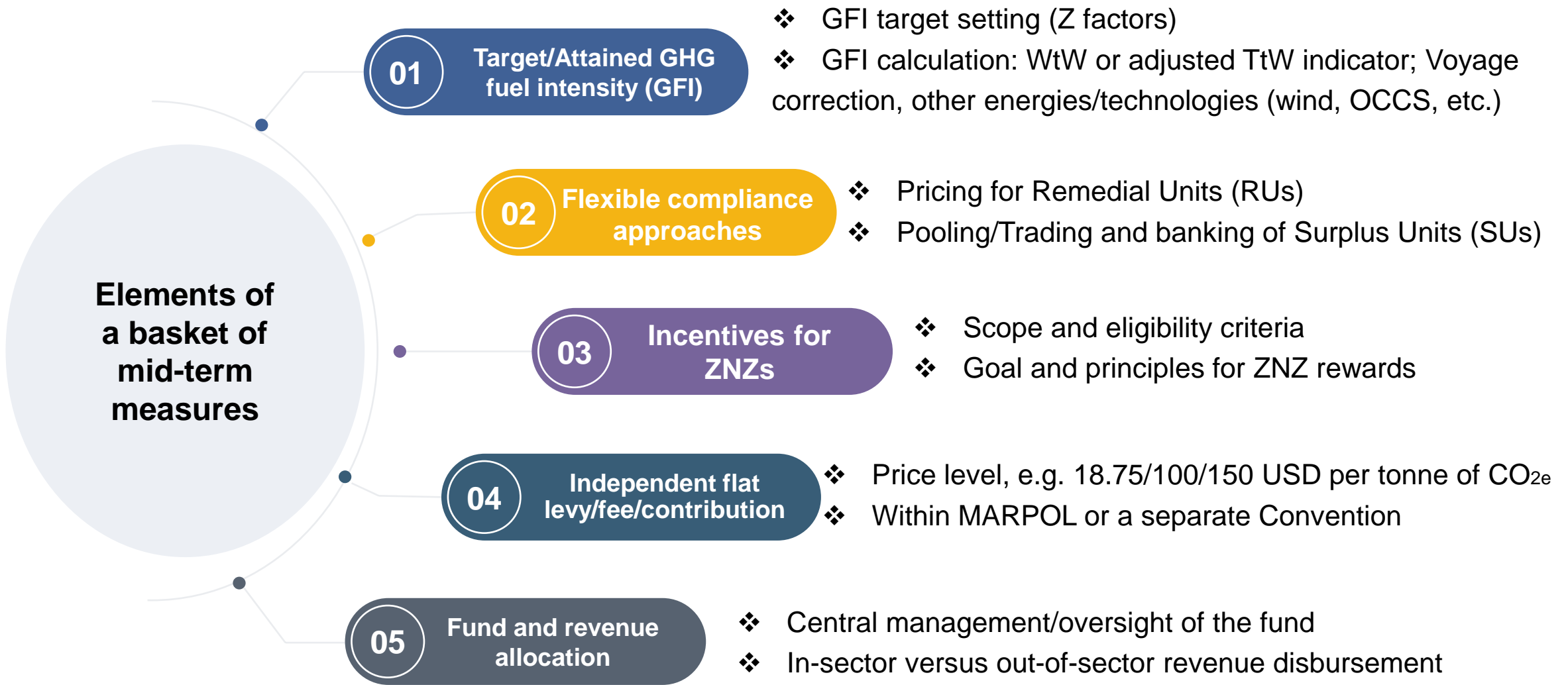
+ **Possible accompanying new guidelines and consequential amendments to existing guidelines**

Original proposal: Fuel Standard with flexibility (without levy)



Original proposal: Fuel Standard with flexibility + Flat levy







Part 4

Potential bridging proposals for the IMO net-zero framework

IMO makes progress on net-zero framework for shipping

IMO's Marine Environment Protection Committee advances talks on proposed regulations for cutting GHG emissions from ships.

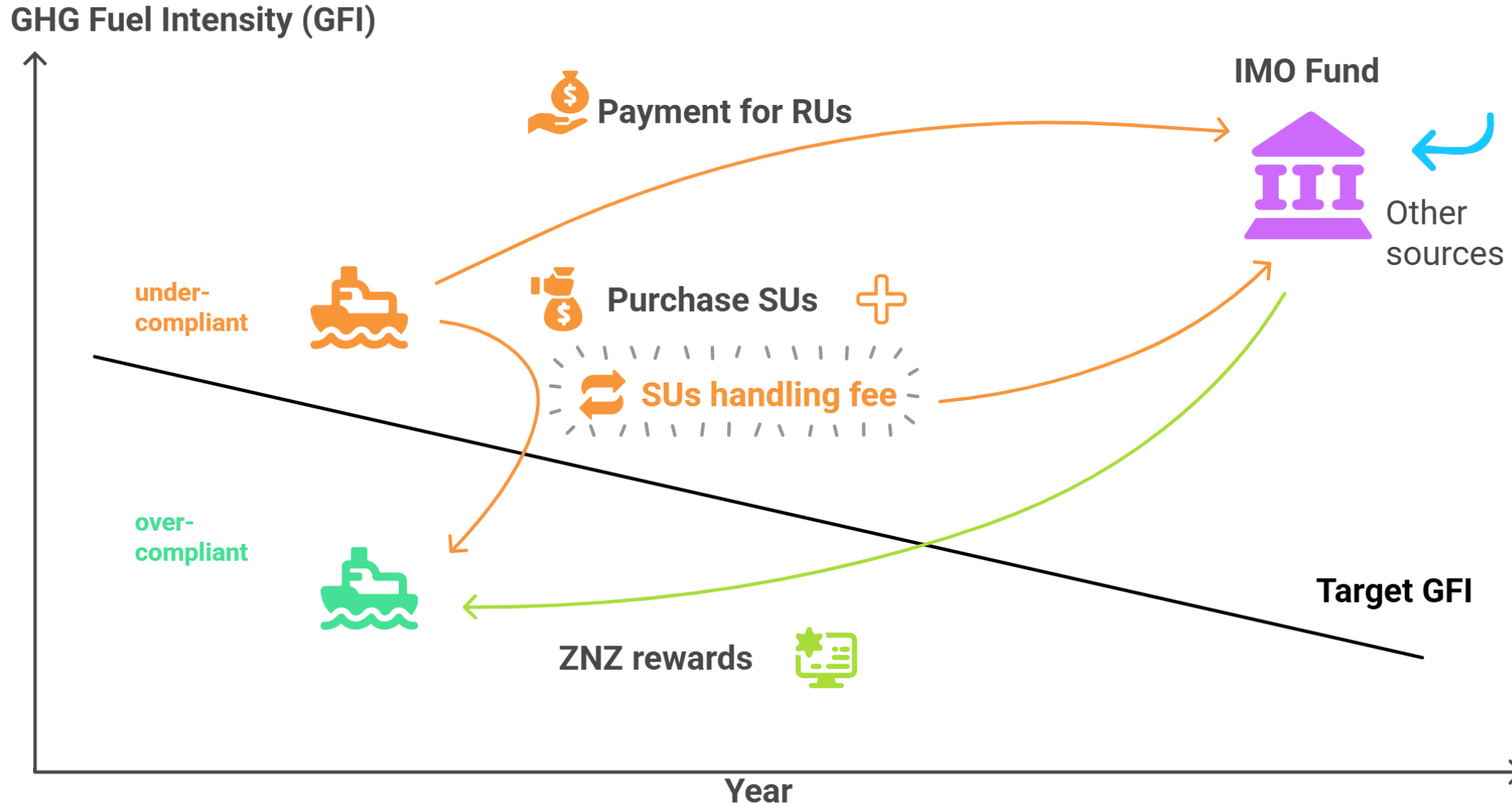
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TOP STORY

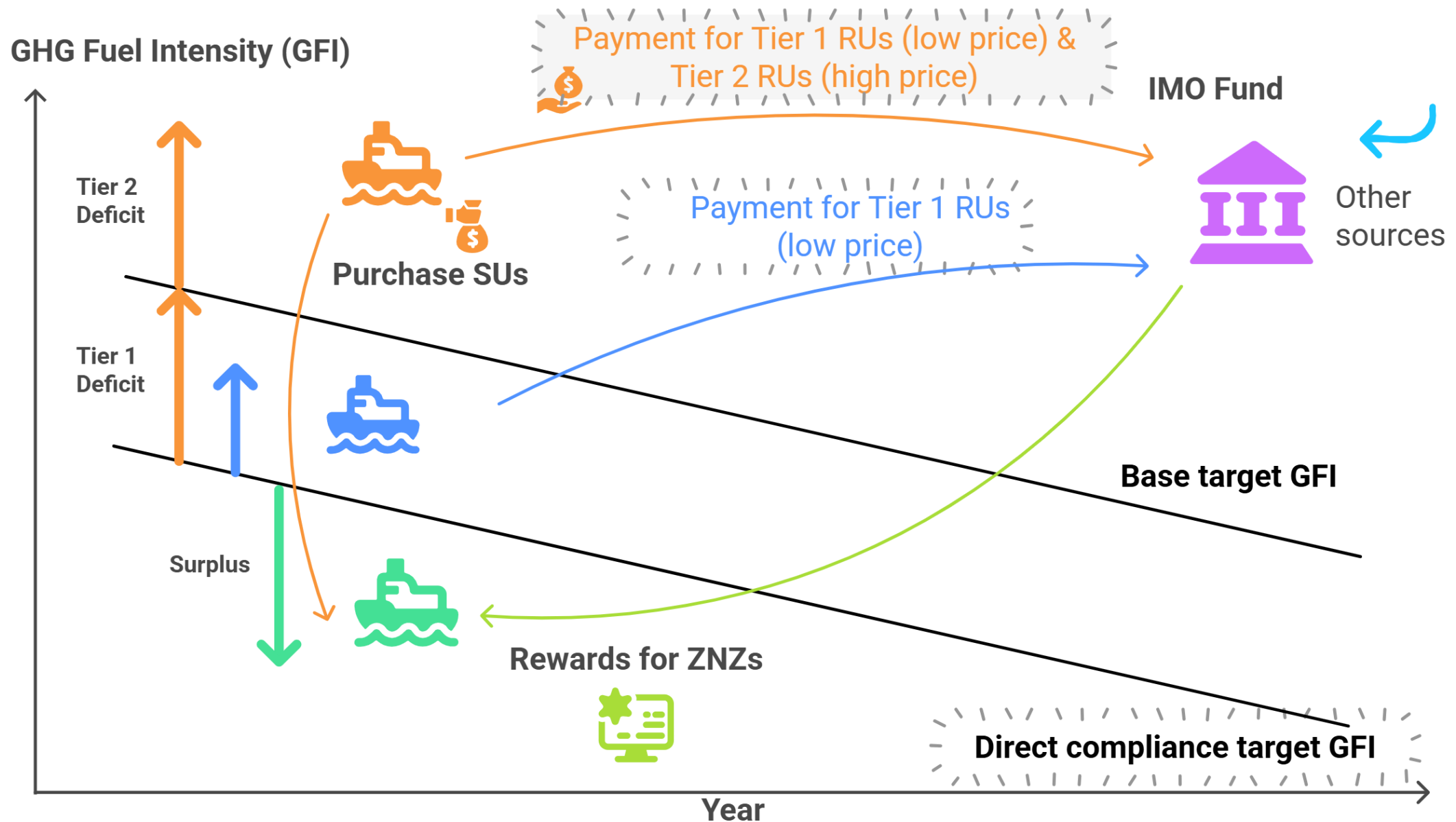


- ISWG-GHG 17 / MEPC 82, September 23 – October 4 , 2024
- ISWG-GHG 18, February 17 – February 21 , 2025
- **ISWG-GHG 19, March 31 – April 1, 2025**
- **MEPC 83, April 7 – April 11, 2025**

Bridging proposal: Fuel Standard with flexibility + SUs handling fee



Bridging proposal: Two-tire Fuel Standard with flexibility



Divergent positions on core elements and potential ways forward



Elements	Divergent positions	Possible convergence point
Target GFI (Z factors)	Methodology and base/strive scenarios	<ul style="list-style-type: none"> • Consistent with IMO GHG Strategy
Attained GFI	WtW or TtW + Sustainability	<ul style="list-style-type: none"> • WtW and other sustainability aspects taken into account
GHG pricing	Goal and methods	<ul style="list-style-type: none"> • Final cost hierarchy: compliant < ZNZs < under-compliant • Implications of two-tier RU prices
Flexibility Mechanisms	Full or limited flexibility	<ul style="list-style-type: none"> • A certain degree of flexibility is necessary • Fair participation and moderate administrative burden • Revenue collection through SU handling fee or two-tier GFI targets
ZNZ Rewards	Scope, threshold and reward price	<ul style="list-style-type: none"> • Eligibility criteria: technologically neutral, strengthened over time • Reward price: price gap narrowed but not closed
Independent universal levy	Necessity and suitable instrument	<ul style="list-style-type: none"> • Disbursement within the context of the Strategy • Practical expectation of revenue size • Alternative ways to raise revenue



Part 5

Maritime energy transition driven by policy

Maritime energy transition driven by IMO net-zero framework

A goal-based marine fuel standard

- Definite demand for alternative fuels
- Roles of low-carbon and ZNZ options
- ZNZ fuels, technologies, and energy sources

Marine GHG emissions pricing

- Address cost gaps
- Incentivize investment and ZNZ uptake
- Generate revenues supporting the goals of the Strategy

01

03

Flexible compliance approaches

- Reduce overall compliance cost
- Cost-effective solutions for small companies
- Accelerate ZNZ uptake

02

04

Sustainability framework

- Basis for GFS and ZNZ rewards
- Pathways towards net-zero
- Further work on LCA Guidelines

Thank you for your attention!

S.

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