January 1, 2020, MARPOL Annex VI – Paradigm Shift or Difficult Adaptation to New Regulations

Are the changes imposed by the IMO through Regulations 14 and 18 of MARPOL Annex VI a prelude to a paradigm shift?

Greek shipping, like all shipping industries, has experienced true paradigm shifts in its history. Not in our time, but in the relatively recent past. The transition from coal and reciprocating steam engines to internal combustion engines was one such shift, and an even greater one was the transition from sail to steam. Entire maritime hubs disappeared (e.g., Galaxidi), while others emerged (e.g., Chios, Andros) through such monumental changes. The difference today is that these changes are not driven by the technological and economic superiority of new developments but are imposed by bureaucratic mechanisms that partially control the International Maritime Organization (IMO). The result will not be improved operational efficiency or cost reduction. On the contrary, the cost of maritime transport is likely to increase, along with technical challenges.

Adaptation will inevitably occur, and part of this process will involve enforcing compliance among those unconvinced by the new regulations. As became clear at the SeaNation seminar on June 5, 2019, most speakers indicated that the preparation and infrastructure for the changes mandated by the amended regulations, effective January 1, 2020, are insufficient. The result will be a prolonged adjustment period until the issues arising from the adoption of major changes without adequate infrastructure are resolved. Adaptation will be gradual, with continuous corrections along the way. Errors, damages, delays, accidents, and their consequences are inevitable, and this does not represent a smooth evolution but rather a disruptive process. However, this will not constitute a paradigm shift. Nonetheless, Annex VI aspires to bring about a paradigm shift with its provisions for a 50% reduction in greenhouse gas emissions by 2050, as outlined in the Initial IMO Strategy on Reduction of Greenhouse Gas Emissions from Ships. This implies the use of new types of non-hydrocarbon fuels. For now, focusing on the immediate impact of banning fuels with sulfur content exceeding 0.5%, I would like to briefly address how I see the implementation of these new provisions in the United States starting January 1, 2020.

Will U.S. authorities enforce Annex VI provisions in the same way they enforce Annex I of MARPOL, i.e., through criminalization?

This is not unlikely, as this is the usual method employed by U.S. authorities for Annex I, and the mechanism already exists under the Act to Prevent Pollution from Ships (APPS), 33 U.S.C. §§ 1901–1915. Memoranda of Understanding from 2011 and 2015 between the Environmental Protection Agency (EPA) and the U.S. Coast Guard (USCG) already address

Annex VI. These outline the enforcement of Regulation 14 of Annex VI, with explicit references to the criminal provisions of APPS, such as 33 U.S.C. § 1907(f), regarding inspections to verify compliance with Annex VI provisions. These inspections are conducted by the USCG on behalf of the EPA. The 2015 Memorandum also explicitly references criminal provisions under § 1908(e), which pertains to the detention of non-compliant vessels. There is also a clear mention of referring certain cases to the Department of Justice for criminal prosecution if warranted.

These provisions have been in effect since 2012, with regulations enforcing the North American and Caribbean Emission Control Areas (ECAs). Therefore, with the new MARPOL provisions, it is expected that some cases will be referred for criminal prosecution.

Although the provisions of Regulation 14, effective January 1, 2020, have not yet been activated, violations of previous Annex VI provisions have already been identified. In the future, the same system of monitoring documents—such as oil record books, logbooks, fuel delivery receipts, samples, and fuel tank contents—will continue to be applied during port state control inspections. Thus, criminalization is expected, but I believe there will be a period of leniency, as it will take several years for all stakeholders—from oil companies and fuel suppliers to engine manufacturers and end-users—to fully adapt to these changes.

Is there experience and expertise in enforcing these provisions?

Absolutely, as the North American ECA has been operational since 2012, requiring the use of fuels with 0.1% sulfur content within these areas. Everyone is aware of what needs to be done regarding ship technical arrangements, the adoption of procedures in the ship's safety management system, and the documentation and record-keeping requirements. From the perspective of port state control, the USCG has been conducting inspections for seven years, so little will be unfamiliar. The same applies to other regions globally. The authorities' experience in this area is well-established.

What other legal challenges will the shipping industry face with the upcoming implementation of Annex VI, Regulation 14?

Numerous challenges. The implementation will cause legal and economic disruption in the relationships between charterers and shipowners, leading to disputes that may end up in arbitration or courts. What will the vessel's description specify regarding fuel, speed, consumption, and fuel specifications in time charters? There are both technical and commercial uncertainties. What will be the quality of fuels, and will they be compatible across different suppliers? In time charters, will the remaining bunkers on board (ROB) at delivery be compatible with those at redelivery? What about the water and chemical

mixtures produced by scrubber operations? Singapore already considers these toxic waste and prohibits ships using them from calling at its ports. Since there is not yet a standardized very low sulfur fuel oil product, disputes over product specifications are likely to arise, which courts or arbitrations in London—where most charter disputes are resolved—will attempt to settle. Other disputes will certainly arise with bunker suppliers, who are responsible for guaranteeing fuel specifications and issuing sulfur content certificates. This could lead to both criminal and civil liabilities. In the U.S., legislation under 33 U.S.C. § 1043.8 requires fuel suppliers to issue receipts detailing the fuel provided to ships. What should fuel orders specify, and what will be the standard terms? Who will be liable for non-compliant fuels, under which law, and which court will have jurisdiction? This is a new chapter that will unfold in practice and will challenge the shipping industry.

Initial Strategy for the Reduction of Greenhouse Gas Emissions from Ships: Addressing Greenhouse Gas Pollutants and Major Changes in U.S. Hydrocarbon Production and Exports

A well-known shipping industry figure recently stated in the press that ships built in 2014 or earlier will become technologically obsolete due to the 0.5% sulfur cap effective January 1, 2020. I believe this is an exaggeration, as any "issues" in adaptation can be addressed with relatively simple and cost-effective technological changes. Regulatory changes rarely bring about a paradigm shift. However, I believe there is a significant effort by many NGOs, in collaboration with certain political entities in various countries, to use environmental protection laws and regulations to serve their ideological and electoral agendas. We should not overlook the participation of private entities, such as banks and industrial organizations, in movements labeled as "sustainable ocean development" and similar initiatives, which promote the replacement of internal combustion engines with new technologies for their own purposes. TradeWinds recently published a "sponsored article" by such entities.

The main argument is addressing what is now called "climate change," previously referred to as "global warming." This genuinely aims for a paradigm shift through top-down regulations. However, the theoretical explanation of the phenomenon and the means of effectively addressing it are not grounded in scientific method or research. Nevertheless, the Initial IMO Strategy for the Reduction of Greenhouse Gas Emissions from Ships pushes for a 50% reduction in greenhouse gas emissions by 2050. Such measures will impose significant and radical changes on shipping, introducing unprecedented command-and-control measures that are incompatible with maritime activities. Alternative fuels are still proposals that have not even reached the experimental stage. Undoubtedly, these

initiatives also have a political dimension, such as the “Green New Deal” proposal within the U.S. Democratic Party during its 2020 election campaign.

In contrast, I believe another paradigm shift is already unfolding before our eyes with the discovery of vast oil reserves in the United States. Few outside the U.S. have heard of the Permian Basin or Bakken Formation. These are geographic and geological regions in Texas, New Mexico, and North Dakota, respectively, containing massive oil reserves. Until 2015, the U.S. was a major importer of oil worldwide. A significant portion of trade in the Gulf involved incoming lighterage from Very Large Crude Carriers (VLCCs). Today, the opposite is true. VLCCs now come to the Gulf to load American shale oil from lighter ships for export. The U.S. is already the world’s leading exporter of crude oil and natural gas producer. Massive oil storage facilities are being built, thousands of miles of pipelines are under construction, and new offshore loading/unloading facilities and petrochemical plants are being developed. Given these developments, it is unlikely that the U.S. will support measures aimed at globally restricting hydrocarbon fuel consumption. The IMO’s policy on reducing so-called greenhouse gas pollutants aligns with the Paris Agreement, from which the U.S. has long withdrawn. Addressing climate change through measures that limit hydrocarbon exploration and production contradicts the U.S.’s current development policy. Thus, it is unlikely that the U.S. will support the IMO’s measures outlined in the Initial Strategy for the Reduction of Greenhouse Gas Emissions from Ships.

The goal of reducing GHG emissions from ships can be achieved gradually, perhaps starting with measures like slow steaming, which would be generally acceptable to all maritime nations and companies. The second part of achieving this goal should rely on new technologies, giving maritime entrepreneurs sufficient time to adopt and adapt, rather than relying on technologies that are currently both extremely costly and largely unsuccessful.

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