

ANNEX

WORLD MARITIME THEME FOR 2022 NEW TECHNOLOGIES FOR GREENER SHIPPING

Background paper

Sustainable maritime transport and greener shipping

The imperative of maritime transport to support global sustainability is clear. Safe, secure, energy-efficient, affordable, reliable, low-carbon, climate-resilient and rule-based maritime transport systems contribute to achieving economically efficient, socially equitable and environmentally sound development.

The ongoing implementation of the 2030 Agenda for Sustainable Development, the United Nations Sustainable Development Goals (SDGs), particularly SDGs 13 (Climate Action), 14 (Conserve and sustainably use the oceans, seas and marine resources for sustainable development); 9 (Industry, Innovation and Infrastructure) and 17 (Partnerships for the Goals), highlight the importance of partnerships and implementation to achieve these goals.

To support the sustainable development agenda, maritime transport will need to fully integrate economic, social and environmental sustainability considerations into relevant planning processes, policies and investment decisions. Greener shipping is central to this aim.

New technologies for greener shipping

Greener shipping requires new and greener technologies. Technology will continue to transform the world, and the greening of shipping will be no exception. Around the world, technology boundaries are being tested. Examples of cutting-edge science and engineering leading to technologies for green shipping abound.

New technologies to increase energy efficiency of ships as well as alternative fuels and the technologies to produce such fuels are important for greener shipping, especially those that can harness renewable energy. Several other technologies are being developed, aiming to assist in the reduction and prevention of adverse impacts to the marine environment and its biodiversity.

New technologies to make greener and more efficient ports are also needed to complement the transition of shipping into a greener future. Digitalization enhancements to reduce turn-around times in ports can also contribute to the greening of shipping, by promoting and enabling optimization of resource and energy use.

Inclusive innovation for greener technologies

Embracing inclusive innovation and technology deployment is key to the success of the transition to greener global shipping. However, inclusive innovation needs close collaboration between governments, industry and academia and the entire maritime value chain to realize its true benefits. Inclusive innovation also needs strong South-South and North-South Cooperation, where all stakeholders come together, especially for green technology demonstrations, diffusion and uptake at the local level in developing countries. All these efforts need to be supported with innovative financing strategies so that no one will be left behind in this green transition.

IMO initiatives to promote inclusive innovation and technology cooperation

IMO is implementing several global technical cooperation projects that incorporate innovation and the demonstration of green technologies. In relation to SDG 13 on Climate Action, the projects include the GreenVoyage2050 project and the Global MTCC Network (GMN) project, both of which include the demonstration and piloting of technological solutions in support of the implementation of the initial IMO GHG strategy. Further, the GHG SMART training programme shares knowledge on research and development (R&D) needs and technologies in relation to maritime decarbonization with small island developing States (SIDS) and least developed countries (LDCs). To pilot GHG solutions, in ASEAN countries the Blue Solutions project is in development.

In relation to SDG 14 on the Oceans, IMO has been supporting green technologies and their inclusive deployment. The GloFouling project, and its complementary TEST Biofouling project, pilots and demonstrates biofouling management technologies. The GloLitter project trials solutions to address marine plastic litter from shipping and fisheries.

A number of additional IMO initiatives aim to further address specific challenges related to green technologies development and deployment. Examples include the Global Industry Alliances, which bring together key industry stakeholders, the FINSMART round table that creates a platform to provide financial solutions for maritime decarbonization, and the Global Maritime Innovation Forum, which aims to support inclusive innovation, with a focus on developing countries, especially LDCs and SIDS. Moreover, the NEXTGEN platform connects ongoing maritime decarbonization projects, technology pilots and initiatives around the world.

Through the GMN project, which established the Global Maritime Technology Cooperation Centre (MTCC) network, IMO has created regional centres of excellence for maritime technology development and cooperation, initially focusing on GHG emission reductions. IMO is currently developing a new coordinating mechanism that would connect the existing MTCC network in the global south to various R&D initiatives in the global north, and to the finance and private sector communities, to catalyze inclusive innovation and technology development for greener shipping. IMO will launch this initiative, titled IMO-CARES (Coordinated Actions to Reduce Emissions from Shipping), in April 2022.

To move forward sustainably, all stakeholders need to showcase maritime innovation, R&D and demonstrate and deploy best practices, including supporting innovative financing solutions.

Strengthening partnerships for greener technologies

If new technologies are essential to meeting the sustainable development challenges of the maritime sector, then partnerships are key to enable the development and deployment of these new technologies. Enhanced partnerships are encouraged among IMO Member States, inter-governmental organizations (IGOs), non-governmental organizations (NGOs), the United Nations system and related industry sectors. IMO currently has several partnership arrangements to support greener technologies and is progressing on a number of new and innovative partnership arrangements.

Showcasing initiatives

The 2022 World Maritime theme provides a good opportunity for the IMO Secretariat, Member States and observer organizations to focus on the importance of a sustainable maritime sector and the need to build back better and greener in a post-pandemic world. It also allows for activities to delve into specific topics related to the promotion of inclusive innovation and uptake of new technologies to support the needs for a greener transition of the maritime sector. This is especially relevant in the context of developing countries, in particular SIDS and LDCs. The theme allows for a coordinated outreach and communications campaign by all stakeholders to highlight IMO initiatives to make shipping greener.

Additionally, through key international events, IMO will have the opportunity to contribute and to showcase the maritime industry's efforts in greening the shipping sector and promoting inclusive innovation. Throughout the year, IMO will provide targeted input into the global conversation on how to move towards a sustainable maritime transport future, in light of the Organization's achievements and ongoing work. All stakeholders are encouraged to do the same.
