



**Maritime
Just Transition**
TASK FORCE

A 10-Point Action Plan to achieve a Just Transition for Seafarers

Skills and training to support a decarbonized shipping industry



International
Labour
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Global Compact



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Shaping the Future of Shipping



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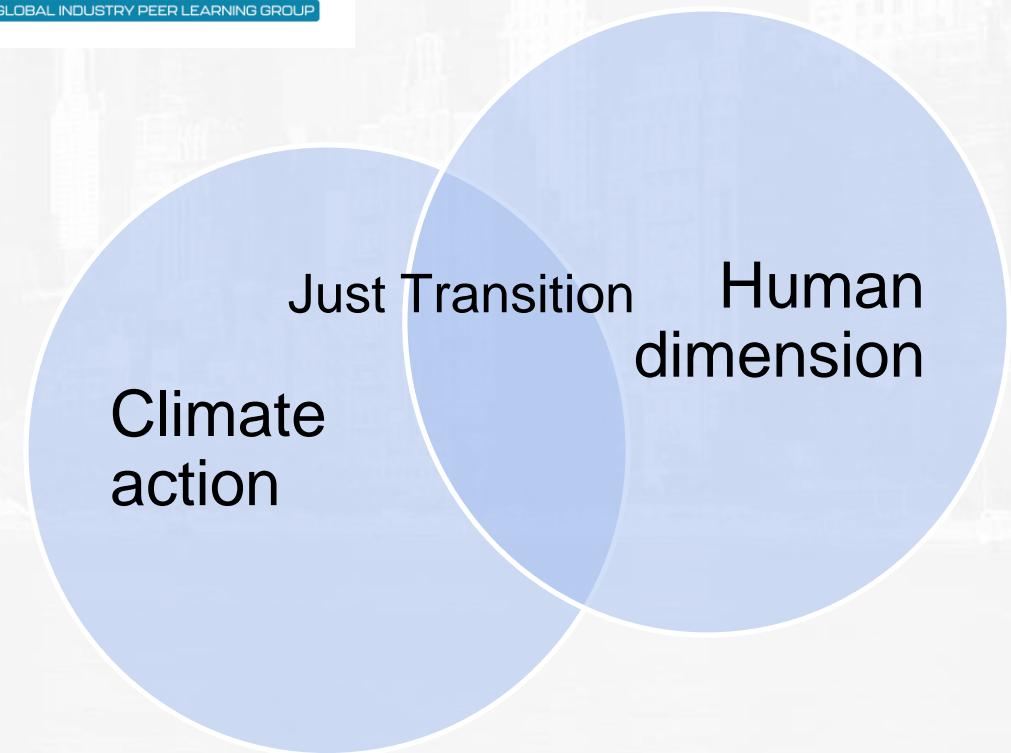


The Maritime Just Transition Task Force was formed at COP 26 to ensure that shipping's response to the climate emergency puts seafarers and communities at the heart of the solution

The Task Force is supported by a Global Industry Peer Learning Group - consisting of workers, employers and academia. The Lloyd's Register Foundation is the primary funder.

A Just Transition means greening the economy in a way that is as fair and inclusive as possible to everyone concerned, **creating decent work and leaving no one behind**. It maximizes the social and economic opportunities of climate action, while carefully managing any challenges – including through **effective social dialogue** and **respect for fundamental labour rights**.

Guidelines for Just Transition have been established by the International Labour Organization. These guidelines are just as relevant in the context of the global shipping industry as it strives to urgently reduce its GHG emissions.



Overview of DNV key findings commissioned by the Maritime Just Transition Task Force

INSIGHTS INTO SEAFARER TRAINING AND SKILLS NEEDED TO SUPPORT A DECARBONIZED SHIPPING INDUSTRY



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Authors: Raymond Antoni Kaspersen (PM),
Henning Ødeby Karlsen, Henrik Helgesen,
Georg Giskegjerde, Christine Lagerstedt
Krugerud & Peter Nyegaard Hoffmann
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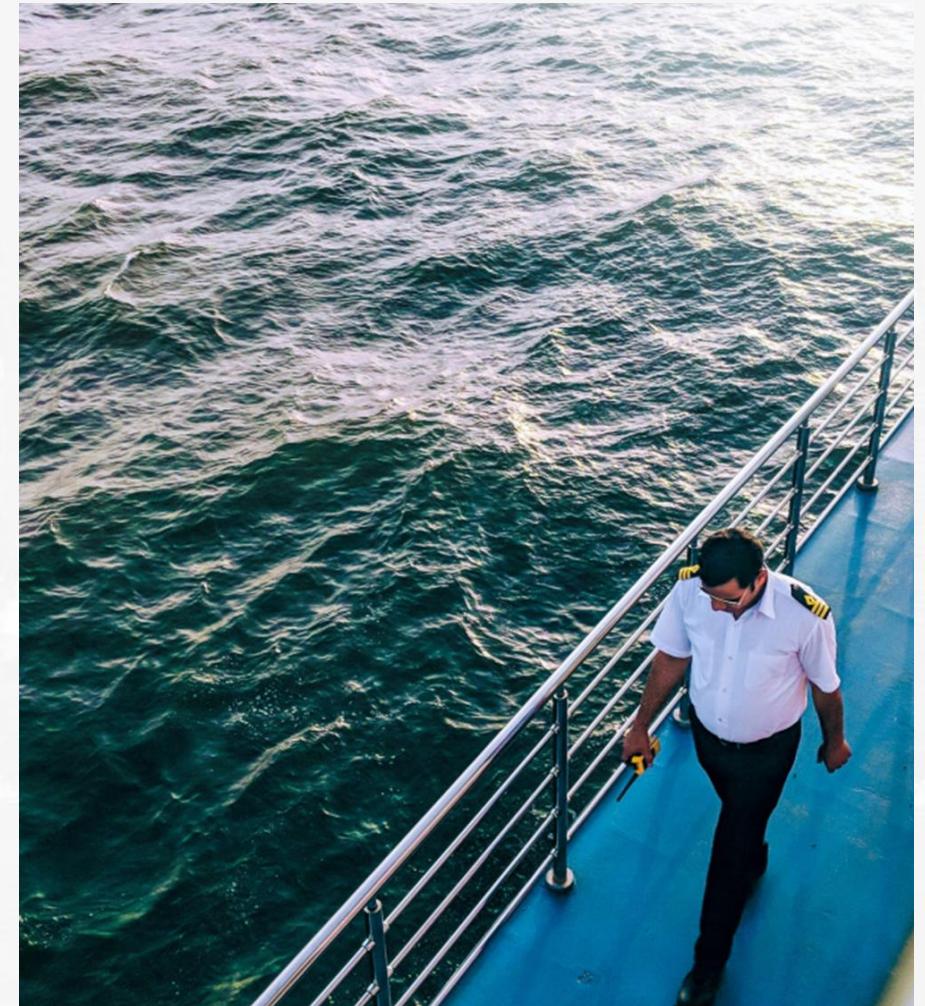
DNV study provides insights into the following questions

How many seafarers will need additional training when introducing alternative fuels?

What training and skills are essential for seafarers to meet decarbonization?

What challenges are present to train the seafarers?

What actions can be taken to achieve the needed skills and training of seafarers?



Scenarios modelled by DNV

GHG scenario descriptions

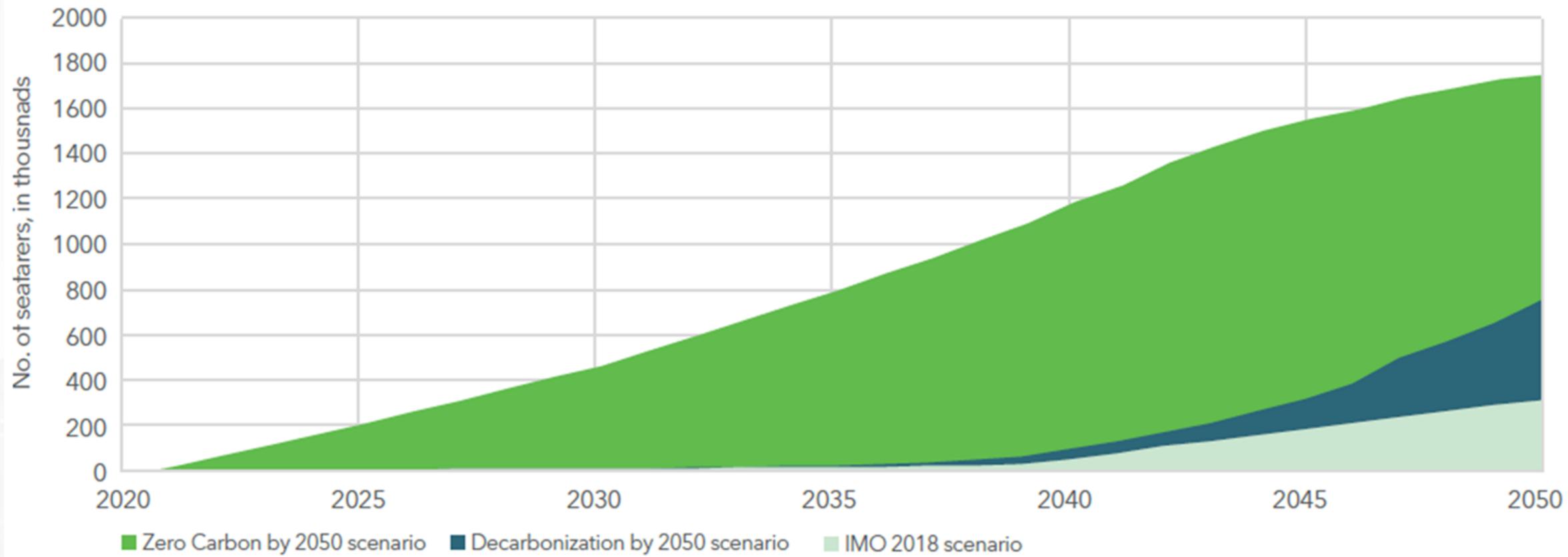
Scenario	Key features
IMO 2018 scenario, modelled in 2021 DNV Maritime Forecast 2050 ^a	<ul style="list-style-type: none">Reduce GHG emissions by at least 50% by 2050 compared with 2008Total emissions below 460 million tonnes of CO₂ in 2050Energy Efficiency Operational Indicator (EEOI) (gCO₂/Tnm) below 5 in 2050'Tank-to-Wake' emissions modelCO₂ reduction trajectory from 2008 levels; 2030: 17%, 2040: 30% 2050: 67%
Decarbonization by 2050 scenario, modelled in 2021 DNV Maritime Forecast 2050	<ul style="list-style-type: none">95% reduction of total GHG emissions in 2050 compared with 2008CO₂ reduction trajectory from 2008 levels: 2030: 17%, 2040: 47% 2050: 95%'Tank-to-wake' emissions modelReference: Additional information regarding this model is provided in Appendix 1
Zero Carbon by 2050 scenario, modelled by Lloyds Register and University Maritime Advisory Services (UMAS) 2019 ^b	<ul style="list-style-type: none">100% reduction in well-to-wake GHG from 2008 levels, using Intergovernmental Panel on Climate Change (IPCC) 1.5 (2018) estimates of wider energy system transitionGHG reduction trajectory from 2008 levels 2030: 33%, 2040: 61% 2050: 100%'Well-to-wake' emissions model

a. Reference: "[UN body adopts climate change strategy for shipping](#)" ([imo.org](#))

b. "Zero-Emission Vessels: Transition Pathways", [Zero-emission vessels: Transition Pathways](#) ([lr.org](#))

As shipping decarbonizes, training of seafarers must happen in parallel

Estimated number of seafarers working on board ships equipped with alternative fuel technologies, all scenarios

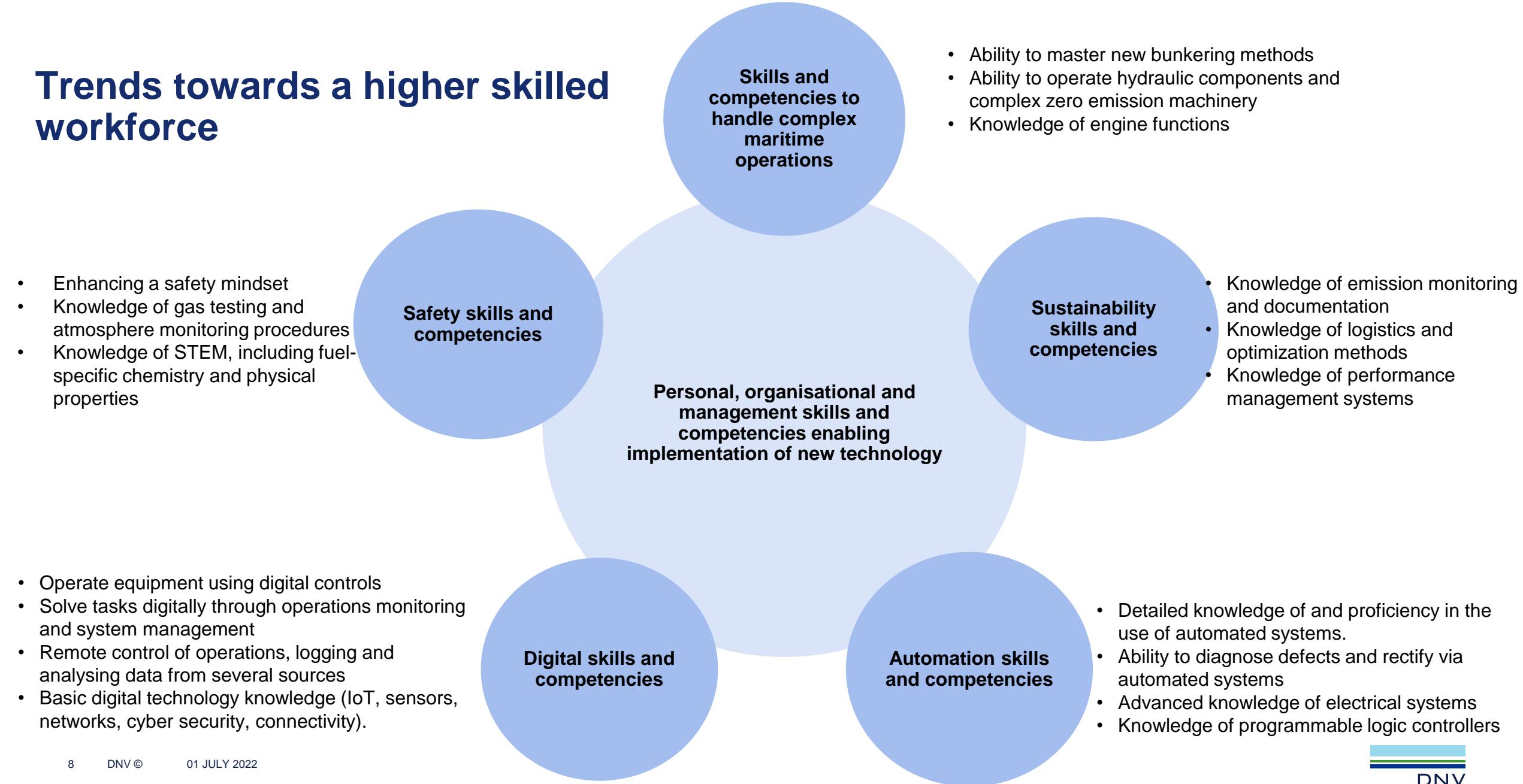


Decarbonization of shipping will require new set of skills



- Uptake of alternative fuels include safety challenges
- Digitalization and automation will follow in the wake of alternative fuel technologies
- The added complexity points toward a need for “higher-skilled” seafarers

Trends towards a higher skilled workforce



Training seafarers to support shipping's decarbonization is already subject to several constraints.

1

Slow regulatory development makes investment in seafarer training challenging

2

A need to invest in training facilities and up to date equipment

3

The availability of trainers

4

Shortage of experienced seafarers

- A lack of clarity in the uptake of alternative fuel technologies and regulatory developments is making it difficult to plan for training seafarers.
- The industry may need to upgrade training facilities with actual replicas of engine/bridge equipment, automation systems, simulators and Virtual Reality/Augmented Reality tools.
- The number of available trainers with knowledge and experience from ships using modern automation systems which run on alternative fuels, is expected to be low and could become a future constraint when a large number of seafarers require training.
- Attracting and retaining seafarers is key to implement new onboard decarbonization-related technologies. Inability to do so may pose a significant challenge to ensure that there are sufficient seafarers to support shipping's transition.

Overview of 10-point Action plan to achieve a Just Transition for Seafarers

10-point Action Plan to Achieve a Just Transition for Seafarers



Just transition principles

Global labour standards

Ensure that Just Transition planning, as part of wider decarbonization plans in the maritime industry, is aligned with globally established labor standards under the Maritime Labour Convention underpinned by social dialogue and stakeholder engagement.

- **Industry** – engage workers around decarbonization strategies, plans around restructuring and any other net zero-related strategy with large employment impacts
- **Governments** – In line with the ILO MLC, policies should facilitate the strengthening of seafarers' competencies, qualifications and employment/



Gender and diversity

Champion 'Diversity, Equity and Inclusion' on board ships as a driver for better performance and risk management in the transition and beyond.

- **Tripartite** – Support efforts that challenge discrimination in shipping, by promoting a safe company culture in which equality, fairness, and respect are incorporated into policies/behaviors.
- **Industry** – Make use of frameworks to review and strengthen D&I practices. These initiatives could be complemented by concrete actions and pledges, alongside monitoring and reporting.



Health-and-safety

Ensure a health-and-safety-first approach to de-risk shipping's green transition with fit-for-purpose training and familiarization on board ships.

- **Industry** – In addition to training, enable sufficient seafarer 'familiarization' periods with new technologies on board ships.
- **ILO** – Consider the prospect of updating guidelines associated with implementing the occupational safety and health provisions of the MLC (2006).

Skills development and monitoring

Investing in skills



Ensure decarbonization plans, including spending and investment, are aligned with the globally established ILO Just Transition guidelines, taking full account of the maritime industry's growing need for skills to support its green transition.

- **Industry and National Governments –** Maritime decarbonization plans, such as National Action Plans (NAPs), should (where relevant) factor in investments towards the necessary skills development for shipping's transition, including for the use of alternative fuels.
- **Industry and National Governments –** Investment towards skills development for decarbonizing shipping should include enhancement of maritime training establishments (e.g. proper facilities and equipment), including the competency of trainers, as well as incentives to obtain licensing and necessary sea time.

Monitoring and anticipating skills



Develop national maritime skills councils, as advisory bodies, to complement the STCW training framework, including giving special attention to the additional skills that the maritime workforce will need to handle alternative fuels.

- **Social partnership approach: national Governments, Industry and Seafarers' Unions –** Establish 'national skills councils' (and strategies) in major and emerging seafarer supply countries. These should involve national governments, industry representatives, training providers, and seafarer representatives, amongst others, to establish a clear collective vision, and roadmap at national level. This could also include undertaking national skills gap analyses for seafarer training.

Global training standards



Strengthen global training standards for seafarers, in the ongoing comprehensive review of the IMO STCW Convention and Code, identifying areas for revision. This includes by replacing or updating obsolete competencies and knowledge, understanding and proficiency (KUP) in line with shipping's digitalization evolution and decarbonization trajectory.

Recommendations to IMO Member States - Examples:

- Urgently revise or establish standards and training requirements for alternative fuel types through amendments to the STCW Convention, as necessary, in consultation with the industry and social partners.
- Existing IMO STCW methodology and requirements employed for competency on gas and tanker segments may serve as a model for seafarer training and familiarization on board ships to handle new fuel types.
- The new global training standards should not be overly prescriptive, given the rapidly changing technological landscape, and should be flexible to accommodate technological advancements.



Deliver equitable training models for all seafarers to keep up with technological advances needed to support the industry's decarbonization and avoid a widening skills and training gap which disadvantages seafarers, in particular from developing countries.

Prior to STCW review – examples:

- **Industry** – In the interim phase, as it relates to additional training, the industry should invest in the reskilling or upskilling of staff according to their roles.

Post STCW review – examples:

- **National Governments and MET** – a strengthened role of maritime universities to provide an upskilled education as per STCW-related competencies (basic and advanced) and of industry to provide specialized fuel-specific training.
- **IMO and National Governments** – Explore the establishment of technical cooperation partnerships on training with seafarer supply countries.
- **Industry and Representatives** – Collaborate with training centers and institutions in emerging seafarer labor markets, to share best practices and support capacity building.

Recruitment and attrition

Seafarer career pathways



Support seafaring careers both at sea and ashore, by establishing mobility frameworks for them to develop transferable skills over their time on board, preparing them for a career ashore, beyond seafaring.

- **Providers of maritime education and training (MET) and Industry** – Improve seafarers' skills relevant to both officers and ratings, including soft skills in leadership and management, through the creation of new training programs aimed at furthering transferability within the industry and supporting the transition to an onshore career.
- **National skills councils** – Develop career pathway frameworks for the maritime industry to promote lifelong learning and highlight sub-sector employment opportunities.



Address recruitment

Take active steps to address seafarer attrition, which represents a significant challenge to attract and retain seafarers (including women) for shipping's green transition.

- **Industry** – Implement early career programs e.g., apprenticeships to attract people at the beginning of their careers, integrating with academic training facilities and other education institutions to foster and recruit cadets and trainees for apprenticeships.
- **National Governments** – In coordination with sector skills councils and industry partners, establish nationwide apprenticeship programs for the maritime industry.
- **Seafarers' Unions** – Work with industry and governments to create conditions to retain existing seafarers and to attract new seafarers, particularly women and youth.

Thank you for listening

