# Crewing needs in 2020 and beyond

What are the possible scenarios for supply of seafarers in 2020 and beyond? And what competencies will those seafarers require?

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Over the past 30 years, seafarers from OECD countries have steadily been replaced by crew from Asia or the non-OECD East European countries. The Philippines, China and India, Ukraine, Russia, Romania and Bulgaria have become the choice of a majority of shipowners looking for cost reduction on crew wages. Which countries will be able to maintain or gain market share?

In my opinion, the primary factors influencing this are the economic status of the country (GDP per capita) and the population of the country. Supplying seafarers to international shipowners is a lucrative business. Remittances by seafarers to their home countries make a significant contribution to the economies of the Philippines, India and Ukraine etc. Based on my thinking, Philippines, India and Ukraine will remain the most important countries in the next decade, with African countries striving to join the race.

The table at the bottom of the page compares the various factors among crew-supplying countries.

Any country that wishes to retain or gain market share will have to review its maritime education and training systems to keep its seafarers in step with the changes in the industry. The pace of change will remain very fast – as we will see. If a country cannot change fast enough, it will become irrelevant to the maritime industry.

## The changing face of shipping

Ships have changed dramatically over the past 30 years. While the 1970s and 80s were the era of the general cargo ship, today we have 20,000teu container vessels and 400,000 tonne bulk carriers. Hot and leaking engine rooms have been replaced with electronic engines controlled by computers. Sextants, paper charts and Decca have been replaced by GPS, Glonass and ECDIS. We have moved from Morse code and telex to VSAT and WhatsApp.

Self-driving cars and the successful use of remote controlled drones have stirred the expectations of the maritime world, and autonomous ships are buzzwords of the industry. Conversations about their introduction have shifted from 'If' to 'When'. The estimates for 'when' range from next year to in 40 years, depending on how you want to portray yourself – as an innovator or a pragmatist.

I would predict semi-autonomous ships will be a reality soon. For example, the ship could be put on this auto-mode in open sea passages. In the beginning, it would be under the watchful eye of a watchkeeping officer. As confidence grows, say in ten years' time, the watchkeeper would not be required for open sea passages. As in the car industry, the technology will be proven first, followed by solutions to regulatory and other concerns. Subsequently, in 30 to 40 years we may see the widespread adoption of such ships.

> "It is our collective responsibility to recruit the right kind of students into our industry and educate them and train them for the future. The next 50 years will see a rapid change in our industry."

## Managing the transition

So what are the challenges facing the recruitment and training industry in these years of transition?

It is very obvious that the seafarers of the future will need to understand technology and its limitations. The seafarer will need to be a person who adopts technology rather than oppose it.

The days of the sledge-hammer and touching and feeling machinery will be rapidly replaced by diagnosing problems through data from remote sensors. Human experience will get new tools of machine learning and artificial intelligence algorithms. Engineering skills will still be required but along with the heavy work of opening up the main engine units, engineers will need knowledge of the ever-increasing automation and electronic systems.

| | Philippines | India | China | Indonesia | Vietnam | Russia | Ukraine | Romania | Bulgaria |
|---|---|---|---|---|---|---|---|---|---|
| Population in millions *1 | 107 | 1,300 | 1,400 | 268 | 97 | 143.9 | 43.8 | 195 | 7 |
| % Growth *1 | 1.5 | 1.08 | 0.35 | 1.03 | 0.97 | - 0.05 | - 0.49 | - 0.5 | - 0.68 |
| GDP per capita (USD) *2 | 2,989 | 1,940 | 8,827 | 3,847 | 2,343 | 10,473 | 2,639 | 10,813 | 8,032 |

***1 – Source: www.worldpopulationreview.com**
***2 – Source: www.wikipedia.org**


**Shipping has changed dramatically over the past 20 years – and will develop at an even faster pace in future**

Environmental regulations will keep getting stricter, in line with global regulations for other industries. The seafarer of the future will be an environmentally responsible global citizen. Ships will use environment-friendly fuels.

Traffic separation schemes will evolve into sea-lanes that will be strictly controlled by vessel traffic centres. In the next 20 years or so, these control centres are likely to remain in an 'advisory' role legally. The role of the seafarers will evolve into compliance, but they will need to be assertive in their final responsibility for their vessel's safety.

## Training and education

While we already seem to be at the end of manning scale reductions, it is inevitable that shipowners will want further reductions as semi-autonomous ships become a reality. Seafaring may evolve and some seafarers will be based in shore operation centres. The next 50 years will see a rapid change in our industry.

IMO and the industry associations will need to spearhead these changes. The education and training industry should be at the forefront of understanding the evolution of our industry. In practical terms, this means that present day syllabus and model courses will need to adopt changes quickly if education and training is to remain relevant to the needs of the industry.

It also means that the recruitment industry will have to look carefully at the technical skills they require in order to ensure they are relevant to the technical competencies needed in the future.

To have successful seafarers, we need to teach them appropriate behavioural skills. Our world has changed. Conversations have been replaced by Instagram and Vimeo. Values of obedience and respect have been replaced by the question 'Why?'

The competencies required by the seafarers today and for the next 30 years have also changed.

The future mariner will have to:

- Process large amounts of data
- Focus on critical issues
- Work with remote teams operating from ashore
- Understand and recognise the limitations and dangers of automation
- Manage continual and rapid changes
- Learn continuously
- Communicate effectively
- Deal with increased stress
- Be an effective and understanding leader.

Dealing with the millennials and Gen Z will be a challenge for many salty seafarers of today!

Teaching methods need to change and keep pace with the times. The methods must be chosen according to the learning outcomes desired, taking into account the habits of present day and future students. Teachers must not forget that competency includes knowledge, skill and attitude to work. All training is ineffective if the attitude to work is not right.

Lots of research has been done on the qualities of millennials. Some of the key findings are:

- Short span of attention (8 to 10 secs!)
- Love of technology
- Love for video games
- Preference for blogs and social media
- Need for instant feedback (Likes!)
- Dislike of authority
- 'Why' is more important than 'How' to do a job.

This may be daunting to an old-school teacher, but remember that the methodology used is only the means to reach the goal – to ensure competency to operate a ship safely and efficiently.

Methods can be changed, improvised or combined according to student's background, age and learning styles.

The rapid pace of change will bring about many more challenges as we head into the future. It is our collective responsibility to recruit the right kind of students into our industry and to educate and train them for the future.