



# SEAFARERS, INLAND WATERWAYS, FISHERS:

## Draft position on the challenges of the Future of Work

1. The development of better software, smaller sensors and better communications is leading to the increasing digitalisation of the global economy. **Digitalisation in the maritime sector allows the further automation of some functions and better employer control of processes as a whole.** It can enable the **increased use of remote-control** technology. Many of these technologies could be used to benefit workers and improve conditions, but can also be used to opposite effect.
2. Digitalisation is leading to **increased use of process and employee monitoring technology** because these impact the most vulnerable cost sector – labour costs. This technology is embedded in equipment, tools or infrastructure and can monitor the physical movements, actions, location, facial expressions, speech and biometrics of workers.
3. The **data produced by these technologies can be linked to benchmarks that are embedded in algorithms.** These can compare workers to their peers, or to an ‘ideal’ and are linked to rewards and sanctions. They are a labour discipline technology. At the moment workers have no input into these benchmarks or how the technology is used. These technologies hugely increase worker stress levels.
4. The data is produced by workers during their work, but it is owned and used either by their direct employer, or by the provider of the technology. And **workers have no control over how this technology is used.** This employer-owned **data can feed automated decision-making** (algorithmic management) and creates an unequal balance of negotiating power.
5. Autonomous (crewless) shipping is still only being trialled. Its development faces significant technical, regulatory and legal barriers to implementation at sea. Until solutions are developed for how autonomous vessels interact with ports, how crewed and autonomous vessels should work together, until ship engines and other critical equipment are capable of running without regular maintenance, or until ship-to-shore communications are fast and secure enough, this technology will be limited to short trips in near-shore regions of the sea. It is therefore currently **more useful to seafarers to discuss highly automated or remotely-operated shipping.**
6. Even when such vessels are developed they are initially likely be limited to the military (where legal and regulatory barriers do not apply) or to niche areas of maritime transport where the cost, regulatory and technical barriers can be minimised. Even here we are more likely to see the deployment of remotely operated vessels than of autonomous (crewless) ones.
7. Remote operation of some vessels is possible for some periods of time, but still requires the presence of qualified and competent crew members on board. Remote control of vessels requires large amounts of data to be securely and rapidly transmitted to and from the vessel. This is a serious technical limitation.
8. Remote operation is possible in inland waterways, coastal waters and with bilateral agreements between two countries. At the moment however, the human machine interface has problems – for example, it cannot prevent workers from suffering from disorientation when operating floating vessels from onshore buildings.
9. In fishing, monitoring technology could be used to ensure decent working conditions at sea, but at the moment it is mainly used to monitor catches and to allow crew to communicate with the shore.

