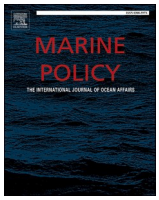
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The vulnerability of observers – An evaluation of observer programs welfare and working conditions policies

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ABSTRACT

Human rights issues on fishing vessels are increasingly receiving much-needed global attention. However, most focus is directed towards the fishing crew, often ignoring other important workers on board fishing vessels, namely, observers. Due to their specific role as the "eyes and ears" on the water, observers are not covered by any current binding international regulations concerning working standards on board fishing vessels. This leaves them relatively unprotected, besides flag state control. One way flag states address observer welfare and working conditions is through observer programmes. The aim of this paper is to assess whether observer programmes fulfil their responsibilities to protect the health, safety, and welfare of observers and their living conditions while onboard fishing vessels. This analysis was done by developing a specific observer benchmark tool for reviewing observer programmes. The results of this research found that, on average, assessed observer programmes demonstrate good performance. Based on the results, four recommendations are provided, including the need to conduct independent reviews of observer programmes. Generally, more research is needed to get a better understanding of geographical hot-spots and observer experiences. Fisheries observers are key to ensuring sustainable fisheries management, and it is imperative that their right to a safe work environment is assured.

1. Introduction

An effective fisheries management framework is essential to ensure sustainable fisheries, relying on data availability and quality and compliance with adopted management measures [8]. Fisheries observers (hereinafter 'observers') are often described as the "eyes and ears" of fishing authorities at sea (e.g., [16] NOAA, NA). The importance of observers has been recognised in international legislation such as the United Nations Fish Stocks Agreement (UNFSA) ([20]; Article 18.3(f)). Observers provide independent third-party verification of many aspects of operations, including catch data of target species and data on catch/discarding of bycatch species, especially endangered, threatened, and protected species such as cetaceans, seabirds, marine turtles, or sharks[16] (NOAA, NA). Observer data feeds into stock assessments and is important in establishing conservation measures for protected species [16] (NOAA, NA). Observers are increasingly tasked to ensure compliance with adopted management measures, such as fishing gear closures [4,17]. Various stakeholders (e.g., non-governmental organisations, industry, and governments) call for increased observer coverage in the fishing industry, especially for longliners [12,22,25]. In most regions, the observer coverage for longliners is around five per cent, compared to 100 % of most purse seiners [13].

Despite the importance of observers in contributing to sustainable fisheries management, their safety has not yet received much attention. This is particularly worrisome given the high number of suspicious deaths and disappearances of observers, with 15 observers having disappeared or died since 2009 [6,9]. As they are tasked to assess compliance on board fishing vessels, observers often find themselves in a vulnerable position, leading to attempts at bribery, intimidation, and violence [3,4,6,15].

While there has been increasing awareness of the lack of regulatory framework for fishing crews [7,18], the situation looks even more dire for observers. The International Labour Organisation's (ILO) Maritime Labour Convention (MLC), 2006, applies to everyone working on board a ship to which this Convention applies ([10]; Article 2(f)). 'Ships engaged in fishing or in similar pursuit' are excluded (Article 4) [10]. Hence, observers and fishing crew are excluded as they work on a fishing vessel. In response to the exclusion of fisheries from the ILO MLC, the

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ILO adopted the 2007 C188 Work in Fishing Convention (hereinafter C188). However, while this convention applies to all fishers and fishing vessels (Article 2.1), observers are excluded from the definition of "fisher" (Article 1(e)) [11]. Due to the lack of international regulations, the protection of observers falls onto flag states and regional organisations [2]. Some regional fisheries management organisations (RFMOs), such as the Western and Central Pacific Fisheries Commission (WCPFC), have adopted binding measures for the protection of observers [21].

National and regional regulatory frameworks regarding observer safety are often implemented via observer programmes. Hence, observer programmes play an essential role in ensuring the safety of observers. This study distinguishes between regional observer programmes (ROPs) and national observer programmes (NOP). Generally, ROPs are based on and use capability from the NOPs within a region. ROPs operate in fisheries globally under relevant RFMOs and other regional organisations. Besides ROPs and NOPs, there are also privately operated observer services that run globally.

This paper aims to assess whether observer programmes' safety protocols ensure the health, safety, and welfare of observers and their living conditions while onboard fishing vessels at sea and in undertaking their employed responsibilities. This paper builds on a report developed by On-Board Social Accountability (OSA) International Ltd[1] for a project funded by the Marine Stewardship Council's Ocean Stewardship Fund program. For this report, a benchmark tool was developed – the OSA Observer Benchmark Tool (O2BT), which was used to review observer programmes' safety protocols. This research did not aim to assess the overall effectiveness of the observer programmes. To our knowledge, the research presented herein is the first comprehensive assessment of the observer programme management of observer safety, health, and welfare at sea. The development and use of the benchmark tool (O2BT) is novel as it is specifically tailored to observer safety, builds upon global norms for both observer programme best practice and labour conditions at-sea and secured input from administering observer programme authorities and practising professional observers. Overall, the O2BT may help observer programme managers benchmark their systems to improve the health, safety, and welfare of observers at sea.

2. Methods

To assess the observer programmes' safety protocols to ensure the health (i.e., access to decent and adequate food and water and accommodations), safety (i.e., protection of observers against injuries), and welfare (i.e., protection against assaults and other forms of intimidation) of fisheries observers, an observer benchmark tool (O2BT) was built. The O2BT allows a standardised comparison between participating observer programmes' safety protocols. Safety requirements include, for example, vessel safety checks that need to be carried out before boarding the vessel, including checking whether the vessel includes all the necessary safety equipment (e.g., distress signals and flares) or has clean and maintained sanitary facilities [23].

The WCPFC's Regional Observer Programme [24], the Association for Professional Observers' Code of Conduct for Responsible Observer Programmes & Observer Health and Safety [1], the International Observer Bill of Rights [1], and the FAO Guidelines for Developing an At-Sea Observer Program 2003 (FAO Technical Paper 414) [5] were used as the basis for the benchmark tool. Furthermore, matters that were not part of the previously listed observer frameworks, such as gender equality, were also included, given the specific risks that female observers may face working in isolated conditions with disproportionately male fishing crews [14,19]. The final and streamlined requirements formed the O2BT, consisting of five categories and 59 key data elements (KDE) (Table 1).

Based on the developed observer benchmark tool, a confidential online survey was developed for the staff of Observer Programmes. Four NOPs and four ROPs participated in the survey. Due to confidential concerns, the identities of the surveyed NOPs and ROPs are omitted. We acknowledge that this can be seen as a limitation of this study. However, the aim of this paper is to provide an overview of observer programme safety protocols, and more specific research is needed in the future. Furthermore, it is important to note that the overall number of participating observer programmes was limited, and those participating in this study were ROPs or bigger NOPs. This could overestimate the existence and comprehensiveness of observer safety protocols. Last, observers' needs differ on whether they are deployed on a national fishery that stays mostly within national waters or a regional fishery that often fishes beyond national jurisdictions in the high seas. Hence, the safety needs for observers deployed in regional fisheries are often more significant.

Generally, the participating observer programmes have $\geq$ 2790 observers working for them, spanning all oceans. Based on the survey, which requested information for the benchmarking exercise, these observer programmes were benchmarked relative to the 59 KDEs. Programmes were benchmarked in an arbitrary (as received), sequential and additive fashion. Once all participating programmes were benchmarked relative to the final checklist, the key topic areas were grouped to identify which subjects were, or were not, addressed by the different programmes. Within each category, a "relative total" was calculated by assigning a score of 1 for a positive response to the KDE and a 0 for a negative or absent response. KDE counts were then summed across programmes within elements or down KDEs within programmes to generate overall scores. The percentages were determined by calculating the total scores relative to the number of KDEs in each category to generate overall scores (Table 2).

Table 1
Overview and description of key data elements (KDE) categories. See Appendix 1 for the full list of KDEs.

KDE category	Nr of KDEs	Description
1.Observer Requirements	8	These are observers' requirements, including elements such as medical fitness, ability to swim, or mental health.
2.Observer Programme	25	These are the overall requirements of the programmes in relation to providing and/or employing observers at sea, such as training for debriefs, the right to refuse to board a vessel or 24-h emergency contact.
3. Training	7	These are key aspects to ensure observers are aware of how to conduct their role, including aspects such as training in navigation, first aid, and discrimination and harassment.
4. Reporting	3	These are the common expectations and methods of Observer Programmes and observers to report observations at sea (e.g., e-reporting or paper-based reporting).
5. Vessels	16	These cover at-sea on-board vessel operations for observers and vessel operators and assess whether observers have full access to all the facilities and the bridge or whether observers are provided with food, accommodation, and sanitary facilities.

Table 2
Scoring range of the observer programmes and respective descriptions.

Key	Range (%)	Description
Good	Above 65	good compliance, improvement at program discretion and/or fulfilment of KDEs
Moderate	35–65	compromised compliance, benefiting from improvement
Poor	Below 35	low compliance, needs improvement

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3. Results

The results of the observer programme benchmarking showed that the eight participating observer programmes demonstrated, on average, "Good" performances (>65 %) across the five KDE categories (Fig. 1). Across all the observer programmes' safety protocols, a total of 43 KDEs scored "Good" performance, 14 KDEs scored moderate performance, and only two KDEs scored poor performance (see Appendix A). The two poor performances were found in the categories 'observer reporting' and 'observer programmes', referring to annual mental health evaluation or questionnaire (1.6) and third-party audit (2.4) with a total score of 25 % and 13 %, respectively. Most moderate performances were also found under the category 'Observer programme' (seven out of 25 KDEs).

While the overall scoring is "Good", the scoring of the individual observer programmes ranged between 53 % and 93 % (Fig. 2). However, it is important to note that the lowest-scoring program (Programme G) did not respond to many questions and may be unnecessarily poorly scored. The higher scores, 68–93 %, were a mix of ROPs and NOPs, so it is not possible to point to one or the other type of programme having a higher performance.

4. Discussion

Due to the lack of international regulations concerning observer's rights, the responsibility to ensure a safe working environment relies on observer programmes. This paper aimed to assess what safety procedures observer programmes have in place to ensure the health, safety, and welfare of observers as well as decent living conditions onboard fishing vessels. The results of this research found that, on average, all the participating observer programmes scored well against the O2BT. The observer programmes D and F had almost all KDEs in place, reflected in their strong overall scores, with 90 % and 93 %, respectively. These two programmes run the largest observer programmes globally with the greatest number of observers (>2100). However, despite this high score, there seems to be a breakdown in the actual situation on board, evidenced by observers' ongoing disappearance and death [6,9].

The KDE with the lowest score was "Third Party Audit" (13 %). Independent performance reviews can be a valuable tool to improve the performance of observer programmes and translate existing policies and regulations to support observers out at sea. To start, internal audits could be conducted, which might allow observer programmes to review their performance, identify gaps and risks, provide opportunities for observers to engage and build capability, and prepare for independent review. Of the participating observer programmes, only programme A has an independent review process. Besides external and internal audits, most observer programmes also lacked annual reviews. Annual reviews are critically important for ensuring the effectiveness of the respective observer programmes.

The use of independent reviews could also increase the transparency of observer programmes, which are often perceived as opaque [4]. However, transparency is needed to increase the accountability of observer programmes and assess their effectiveness [4]. Furthermore, providing transparent access to information would also help hold flag states accountable for the actions of their vessels, not only in terms of compliance with existing measures but also concerning the treatment of observers [4].

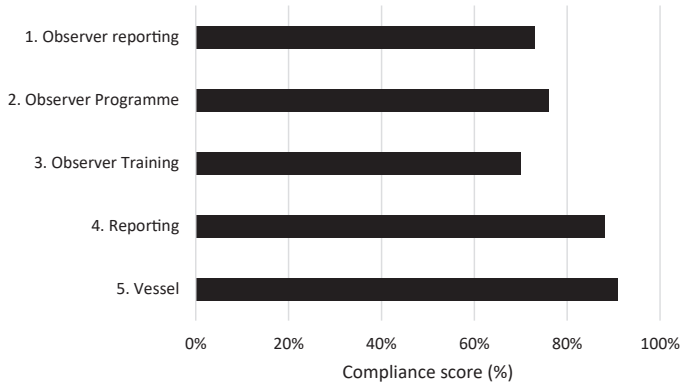


Fig. 1. Overall Key Data Element Compliance Scores.

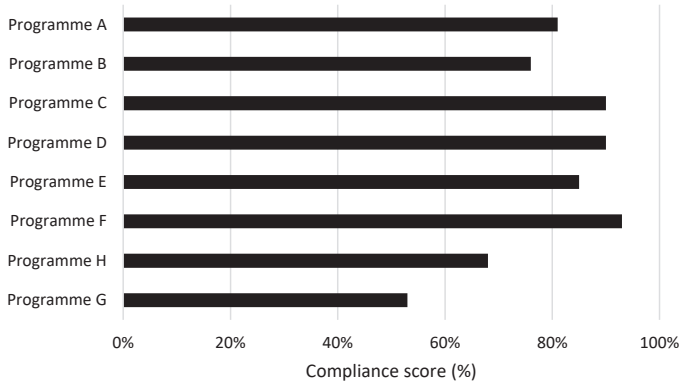


Fig. 2. Scores of observer programs against key data elements.

Generally, most programmes are based on the same global frameworks.[2] Hence, similar elements are missing. Given the reliance of observer programmes on these frameworks, they should be reviewed and updated to reflect the latest practices in the field and the increasing threat to the safety of observers. Furthermore, it appears that observer programmes directly copied these global standards without tailoring them to their region and specific needs.

5. Recommendations and future opportunities

The research presented in this paper used a benchmark tool that assessed observer programmes against KDEs. The O2BT is the first step towards assessing the welfare framework provided by observer programmes. However, more research is needed to increase knowledge and understanding of ensuring observers' health, safety, and welfare. The following recommendations highlight specific research needs and opportunities.

First, one of the most important research needs is to conduct interviews with observers and assess whether the observer views align with the existing policies and regulations. Personal communications with observers revealed the likelihood of potential discrepancies, and more research is needed to understand this problem. This is important to ensure a coherent framework for the health, safety, and well-being of observers.

Second, observer programmes should undergo regular, independent, transparent, and global reviews. The observer benchmark tool presented here could be used as a basis for such reviews. More work is also needed to understand smaller NOPs that may be developed with lesser adherence to international norms, or the best practices used by larger RFMOs. Furthermore, it is important to note that review exercises would need a risk management framework to ensure that criminal elements (e.g., drug smuggling, human trafficking, weapons, etc.) are not emboldened by weaker observer programmes.

Third, it would be helpful to develop geographical hot-spot maps of known observer challenges and analyse the map in relation to the economics of those fisheries. It is important to understand where these abuses occur geographically and the supply chain's related economics.

[2] WCPFC ROP; Association for Professional Observers' Code of Conduct for Responsible Observer Programmes & Observer Health and Safety, FAO Guidelines for Developing an at-sea observer programme 2003.

Building an interdisciplinary data set of abuse, intimidation, discrimination, and harassment events would allow for assessing patterns and correlations. For example, are abuses more likely in right-margin fisheries or across the richest, most profitable fisheries?

Fourth, it is important to combine the findings of this study with previously conducted studies (e.g., [4]) and to identify and address gaps. Based on this assessment, an Observer Programme Best Practice framework could be developed and communicated to the respective stakeholders.

6. Conclusion

Observers are arguably one of the least protected workers in the maritime industry. Due to the lack of international regulations, the responsibility to ensure fisheries observers' safety, health, and welfare falls onto the regional or national observer programmes. This paper aimed to assess whether these programmes are upholding their responsibilities. To conduct the analysis, an observer programme benchmarking tool was developed – the O2BT. This tool allows a standardised assessment of the different observer programmes. The results showed that, on average, the assessed observer programmes demonstrated a "Good" performance. However, more attention must be paid to aspects such as independent review. More research is needed to strengthen observer welfare and safety, and the next steps include, for example, interviews with observers to understand what is happening on the water. The O2BT can be used as a basis to conduct reviews of the observer programmes to ensure that their regulations and policies are effectively implemented. We rely on observers for sustainable fisheries management – it is essential that fisheries workers' right to a safe work environment is ensured.

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CRediT authorship contribution statement

Bianca Haas: Writing – review & editing, Writing – original draft. **Peter Trott:** Writing – review & editing, Data curation, Conceptualization. **Marcelo Hidalgo:** Writing – review & editing, Data curation, Conceptualization.

Declaration of Generative AI and AI-assisted technologies in the writing process

During the preparation of this work the author(s) used Grammarly in order to improve the readability and language of the manuscript. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the published article.

Declaration of Competing Interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Hidalgo Marcelo & Peter Trott reports financial support was provided by Marine Stewardship Council. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix

Table A. Key data element and compliance scores of observer programmes

Key Data Element	Score (%)
Observer Requirements	
1.1 Mandatory medical examination	100 %
1.2 Observer informed/aware of their duties	100 %
1.3 Own unique identification	88 %
1.4 Valid medical certificate issued by a qualified medical examiner stating the Observer is physically fit for duty	100 %
1.5 Vaccinated for communicable diseases as appropriate	50 %
1.6 Annual mental health evaluation or questionnaire.	25 %
1.7 Basic swimming skills. (i.e., ability to swim 500 m and tread water for 30 min)	38 %
1.8 Required to adhere to the applicable code of conduct for Observers	88 %
2. Observer Programme	
2.1 Right to refuse to board a vessel.	100 %
2.2 Are Observers aware that they have the right to refuse to board if feel unsafe	100 %
2.3 Training for debriefers	75 %
2.4 Third party audit	13 %
2.5 Internal audit	50 %
2.6 Observer performance review and monitoring	88 %
2.7 Programme has a module re Health, Safety and Welfare (HSW)	100 %
2.8 Vessel safety certificate/form completed	75 %
2.9 Life-saving beacon & two-way satellite communication	88 %
2.10 24 hr emergency contact	100 %
2.11 Emergency Action Plan (EAP), and is this EAP explained and fully understood by the Observer?	75 %
2.12 Vessel Safety Checklist (VSC) implemented and in place prior to boarding?	88 %
2.13 Does the Observer have the right to refuse boarding a vessel if the VSC highlights that the vessel does not comply with expected standards?	100 %
2.14 Codes of conduct, guidelines, policies, etc, addressing prevent and deter alcohol-related misconduct of Observers?	88 %
2.15 Food and accommodation managed and arranged by Observer Programme?	63 %
2.16 Living and working conditions onboard vessel guidelines?	88 %
2.17 Guidelines for Observers to utilise motor vehicles, aircraft or transport vessels in the course of completing duties?	38 %
2.18 Provide medical examiners with written guidance on the procedures for the conduct of medical attention, and list of physical expectations as defined by the programme?	63 %
2.19 break times between deployments and work-leave options that allow Observers to recover mentally and physically, including clear protocols with established time frames?	88 %

(*continued on next page*)

(*continued*)

Key Data Element	Score (%)
2.20 Trade Unions available to Observers to join?	50 %
2.21 Clear process and procedure for investigating HSW allegations?	88 %
2.22 Are all allegations formally investigated?	88 %
2.23 Has there been incidences, accidents or allegations regarding serious injury or abuse.	50 %
2.24 Has there been incidences, accidents or allegations regarding Observer labour rights.	75 %
2.25 Have there been prosecutions due to the abuse or injury related with the Observer?	63 %
3. Training	
3.1 Navigation	50 %
3.2 Communication devices	50 %
3.3 Verbal debriefing and reporting	63 %
3.4 First Aid including: Assess and respond to an accident situation; Treat an unconscious casualty; Treat for shock; Treat for bleeding; Treat burns and scalds; Treat fractures; Treat hypothermia; Rescue and transport of a casualty, CPR?	75 %
3.5 Safety at sea to an international standard	88 %
3.6 Health, Safety and Welfare: including the following topics: - Vessel/Shore-based Facility/Offshore Installation Hazard Topics; - Safety Equipment Topics; - Survival Training Topics; - Regulatory Topics?	75 %
3.7 Discrimination and harassment	88 %
4. Reporting	
4.1 e-reporting	88 %
4.2 Paper based	88 %
4.3 Process and procedure for debriefing	88 %
5. Vessel	
5.1 Full access to/use, of all facilities and equipment of the vessel, including full access to the bridge?	100 %
5.2 Full access to the vessel's navigational equipment, charts, radios and other communications equipment and personnel.	100 %
5.3 MOU with fishing company to protect Observer whilst at sea.	63 %
5.4 Are Observers provided with food, accommodation, adequate sanitary amenities, and medical facilities of a reasonable standard	100 %
5.5 Freedom to carry out their duties without being assaulted, obstructed, resisted, delayed, intimidated, or interfered with.	100 %
5.6 Dispute resolution mechanism in place for both the Observer and vessel?	88 %
5.7 Familiar with the emergency procedures aboard the vessels.	100 %
5.8 Required to communicate regularly with the vessel captain.	75 %
5.9 Required to be observant of the ethnic traditions of the crew and customs of the flag State of the vessel?	63 %
5.10 Do Captains of vessels have the ability to assign, at his or her discretion, a vessel crew member to accompany the Observer when the Observer is carrying out duties in hazardous areas?	88 %
5.11 Are vessels Captains and crew Informed of the Observer's rights and responsibilities?	100 %
5.12 Are Captains and crew required to assist Observers to safely embark and disembark the vessel at an agreed place and time?	100 %
5.13 Are Captains and crew informed and directed to allow and assist the Observer to carry out all duties safely?	100 %
5.14 Are Observers covered by the vessels insurance whilst on board	88 %
5.15 Are Captain and crew instructed to not assault, obstruct, restrain, delay, intimidate, interfere with, influence, bribe or attempt to bribe the Observer	100 %
5.16 Participate in safety drills onboard vessels?	100 %

Table B
Observer programme areas for improvement for KDEs scored moderate or poor.

KDE category	Areas of improvement
1. **Observer requirements**	
Vaccinated for communicable diseases as appropriate?	Ensure observers are vaccinated for communicable diseases as appropriate.
Annual mental health evaluation or questionnaire?	Develop programmes to manage observer mental health.
Basic swimming skills. (swim 500 m, tread water for 30 min) minutes)?	Ensure observers have basic swimming skills
2. **Observer Programme**	
Third-party audit	Conduct third party audits.
Guidelines for observers to utilise motor vehicles, aircraft or transport vessels in the course of completing duties?	Develop guidelines for the operation of motor vehicles, aircraft, or transport vessels in the course of completing duties
Internal audit	Conduct internal audits
Food and accommodation managed and arranged by observer Programme?	Work closely with vessel managers to provide appropriate food and accommodation for observers
Provide medical examiners with written guidance on the procedures for the conduct of medical attention and a list of physical expectations as defined by the programme.	Provide medical examiners with written guidance on the procedures for the conduct of medical attention and a list of physical expectations as defined by the programme.
Trade Unions available to observers to join?	Not prevent observers from joining a Trade Union should they choose to.
There have been no incidences, accidents or allegations regarding serious injury or abuse.	Diligently ensure Health and Safety at Work.
Have there been prosecutions due to the abuse or injury related with the Observer?	Remediate, investigate, and, where appropriate, prosecute in instances of failure of Health and Safety at Work,
3. **Observer Training**	
Navigation	Train in navigation.
Communication devices	Train in and provide communication devices
Verbal debriefing and reporting	Train in verbal debriefing and reporting.
4. **Vessel**	
MOU with fishing company to protect observer whilst at sea.	Establish MOU with the fishing company
Required to be observant of the ethnic traditions of the crew and customs of the flag State of the vessel?	Ensure observers are aware of the ethnic and cultural traditions of crew and vessel origin prior to embarkment.

Data Availability

The data that has been used is confidential.

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