



# **FiNS**

## **Fishers' Non-technical Skills**





### **Acknowledgements**

The Fishers' Non-technical Skills (FiNS) system is a behavioural marker system developed by psychologists from the Applied Psychology and Human Factors (APHF) research team at the University of Aberdeen with support from fishers and members of fishing and fishing safety organisations. The copyright of this publication is owned by APHF, University of Aberdeen. It may be photocopied or electronically reproduced by downloading this handbook from the APHF website without further permission for personal, organisational, or non-profit use. No reproduction by or for commercial organisations is permitted without the express permission of the copyright holders.

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## Introduction

Fishing represents one of the riskiest occupations worldwide (Seafish, 2023). From 2013 onwards, 59 fishing professionals have died while working on a fishing vessel in the UK. The fatality rate in the industry is approximately 100 times higher than that of the general UK workforce (Seafarers, 2023). What is more, hundreds of non-fatal, albeit severe injuries happen each year in the industry.

The main causes of fatalities whilst at sea are well-known and include personal injuries and drowning as well as vessel losses due to foundering, capsizing/snagged gear, collisions, grounding and fires and explosions (Roberts & Carter, 2015).

The APHF research team used an applied psychology and human factors approach to evaluate the factors involved in these accidents, alongside conducting research with fishers to explore the key skills needed for safe and effective work performance. The findings from this research project lasting one year and a half, combined with input from fishing experts (fishers, fishing organisations and fishing safety professionals) made it obvious that fishers need good non-technical skills in addition to their technical expertise and that a lack of these skills could lead to accidents and injuries.

Many experienced fishers will have a range of good non-technical skills, although they may not refer to these skills as non-technical (other terms

include safety skills) or be able to articulate exactly what these skills are. Approximately 80% of all workplace accidents stem from non-technical error. Dedicating time to understand, assess and develop strong proficiency in NTS skill use can contribute to safer and more efficient work practices.

As such, all fishers should seek to develop, and enhance, proficiency in these skills as part of their fishing safety management and everyday practice – although this would be difficult without a framework to guide development. Current training (both mandatory and optional) is focused primarily on technical skill development and as such does not facilitate non-technical skill development directly. The Fishers' Non-technical Skills (FiNS) system was designed to provide a much-needed framework, and common vocabulary, for discussing, assessing and training fishers non-technical skills.

### What this handbook contains

This handbook contains a guide to the FiNS system.

**Part 1:** Information for users outlines guidance for the use of the behavioural marker system.

**Part 2:** The FiNS system provides the full contents of the system across categorical and elemental levels, in addition to providing behavioural markers for each element.

**Part 3:** Use of the FiNS rating system includes a description of the evaluation criteria, and the observation / rating form associated with FINS.

For more information on the FiNS system and underpinning research, please visit the APHF website.

### Part 1: Information for users

#### What are non-technical skills?

Research within high-risk industries (e.g. aviation, offshore drilling, fishing) indicates that many incidents and injuries are caused by underlying human factors, including lapses in non-technical skills, rather than technical competence. For example, a tired fisher not keeping the navigational watch accidentally steers his vessel into another water user.

This incident would not be considered to have been caused by the fisher's technical navigational ability. Instead, it can be argued that their fatigue level led to them taking less notice of their surroundings (lapse in non-technical skill - situation awareness).

Conversely, strong NTS are critical for safe and efficient performance.

There are two main categories of non-technical skills:

- Cognitive (thinking) skills such as situation awareness and decision making
- Social (interpersonal) skills such as communication and teamwork

Some non-technical skills, such as task management, might have social and

cognitive elements.

Technical skills are necessary for fishing but alone are not sufficient to maintain the safety of an individual or team – that requires a combination of technical and non-technical skills. As such experienced fishers are likely to recognise some, or all, of the skills covered in this system as behaviours they use on a daily basis. The aim of FINS is to support recognition and further development of these skills in both experienced, and new entry, fishers. Incorporating direct training of non-technical skills in the existing training curriculum should increase the chance of high-level performance of those skills over time.

#### What are behavioural marker systems?

Behavioural marker systems are lists of safety critical skills, with associated elements and observable behaviours, usually accompanied by a rating scale used to identify and evaluate observable non-technical behaviour which can contribute to positive or substandard performance. The assessment can further provide valuable, structured feedback and identify further training needs.

They usually consist of three key parts:

- A list of necessary non-technical skills for performance in a specific role
- Examples of good and poor observable behaviours related to each skill
- A rating system to evaluate behaviours and provide structured feedback

These systems must be context or role specific and as such must be developed with input from subject matter experts and based on research conducted within the relevant domain. This format is something we know works for other industries, such as rotor-wing aviation (e.g., the HELINOTS system) and farming (e.g., the FLINTS system) and we are now introducing it to fishing. Similar to these other BMS systems, the FiNS system was developed on the basis of a research project including content analyses of fishing accident reports and critical incident interviews with fishers. A prototype FiNS system was developed using the combined findings of those studies. The final system was designed through a series of discussion groups with fishing industry safety stakeholders who ensured the wording used was understandable, and that the behaviours described were relevant and observable within a fishing context, followed by an academic review.

**Remember** non-technical skills are not independent of technical knowledge, safe and effective performance requires both technical and non-technical skills.

### **What is the FiNS system?**

The FiNS system is a behavioural marker system developed by psychologists from the APHF group, with support from fishers, fishing organisations and fishing safety professionals. It was developed in the context of UK commercial fishing and as such it is advised that it is used in this context.

The system is designed to allow for the observation, rating, and feedback of fisher non-technical skills performance.

FiNS describes the core non-technical skill (NTS) categories specific to fishers in as few categories and elements as possible. This was to ensure the production of a concise and usable system. Fishing can encompass a range of different activities, often dependent on the type of the operation (e.g. potting versus trawling). FiNS includes a range of behaviours related to non-technical skills across these different tasks in order to encompass different types of commercial fishing. However, it is by no means exhaustive but rather provides an overview of the types of behaviours that can occur to aid assessment.

The system is designed to be used by individuals familiar with good fishing practice and who have a good level of technical knowledge. FiNS is developed on the basis that all system behaviours are directly observable or may be identified through communications between fishers/crew members. The system has three levels (skill category; element; behaviour examples) and is made up of seven core categories and 17 associated elements (Table 1). The system provides definitions of each category and their associated elements.

Table 1: FiNS taxonomy.

Category	Elements
Task and boat management	-Following regulatory safety standards and the vessel rules, practice and protocol -Planning and preparation -Implementing safe lone working strategies
Personal resource management	-Managing fatigue and awareness of personal capabilities and resilience -Managing mental health
Situation awareness	-Environmental awareness and navigational considerations -Avoiding problems by thinking ahead
Dynamic decision making	-Dynamic risk assessment and management -Safe systems of work
Leadership	-Leadership for safety -Collaborative leadership -Monitoring the operation
Crew communication and teamwork	-Communication -Coordination and teamwork for safety
Communication with third parties	-Other boats -Authorities and NGOs -Family and friends

The full FiNS system is shown in part 2 of this guide.

## Using the FiNS system

The FiNS system is intended to be used for the following purposes:

- To provide a framework for discussion of non-technical skills with fishers as part of toolbox talks (where applicable), briefings or debriefings.
- For use as a rating tool to assess fisher non-technical skill performance through observing fisher behaviour in practice. This assessment might constitute part of a training programme, safety evaluation, or vessel visit from a safety professional.
- To provide structured feedback on non-technical skill performance and development.
- As support for individual self-development and reflection on practice.

## General recommendations

It is recommended that users first observe performance while taking note of any specific behaviours or omissions. Assessments should be based solely on behaviours that are observed or directly communicated. Using these observations, a rating may first be made at an elemental level, then at a more general categorical level. The associated rating system should be used to determine the level of performance achieved (optimal/sub-optimal), with a nonapplicable option for skills that could not be observed within the current situation.

Users of FiNS require time to become familiar with the system and its use.

Repeated use over time is recommended as part of the familiarisation process.

Individuals using the rating system as part of an assessment should receive instruction on observation, assessment/rating, and the application of the system prior to use.

Under no circumstances should use of the system interfere with ongoing fishing activities or actions during observation periods. The user must be careful to position themselves out of direct contact with any equipment when conducting ratings.

FiNS should be used to help shape assessment and feedback on non-technical skills in a supportive and transparent manner. The system is part of a learning experience and should be used regularly to facilitate ongoing skill development.

### **User selection and training**

To rate behaviours using FiNS effectively, users should have training on and/or experience with the following from either classroom or work contexts:

- Knowledge on human performance, non-technical skills and error management.
- Principles of using rating scales to observe and assess performance.
- Practice using FINS to observe fisher behaviours during fishing activities.
- Providing constructive feedback.

### **Fisher selection and training**

- Fishers should receive their own copy of the FiNS booklet.

- Fishers should receive training on topics such as human performance, error management and non-technical skills (this could be incorporated into undergraduate educational programs and general fishing safety training).
- The user / trainer should explain to fishers why the structured rating of NTS is important, and why FiNS has been developed for this purpose.

### **Suggested functions for FiNS**

- To assess and review overall fisher/crew member performance regularly as part of ongoing skill development and/or training.
- To guide discussions on fishing and the role of non-technical skills in fishing safety and performance.
- To enable trainers, safety professionals and fishers to discuss non-technical skills in relation to adverse incidents.
- To support provision of feedback on non-technical skill performance during fishing/vessel assessments.

### **Practical tips**

- Use FiNS across a range of fishing types and activities.
- New users should work at the element level as behaviours can be more directly observable, i.e. start more granularly and proceed to higher-level skills (more details on this aspect are provided in the rating section)
- If using FiNS for assessment purposes, users are advised to take notes during the observation period then make assessments based on these notes.
- Users should also ideally take notes about the specific circumstances of the assessment (e.g. level of experience,

fishing equipment etc.) in order to establish the context for themselves and then provide personalized feedback – Fishers should receive feedback and a debrief session as soon as practical after the observation period, containing the results of the observation, recommendations for improvement and additional relevant information (e.g., specific circumstances of the assessment, as above)

## Part 2: The FiNS system

**TASK AND BOAT MANAGEMENT: Organising the required fishing activities and resources to maintain safety and quality standards. (Mainly aimed at owner/skipper level)**

**Following regulatory safety standards and the vessel rules, practice and protocol:**  
 Ensuring operational safety through knowledge of, and adherence to, good practice and vessel-specific safety protocols and guidelines. Supporting safety and quality by ensuring equipment and vessel are in safe condition and maintenance guidelines are followed.

Example behaviours for good practice	Example behaviours of poor practice
+Follows the protocols outlined in the Safety Folder (or other booklet of procedures) in terms of layout and usage of safety equipment and encourages others to do the same +Performs emergency drills (e.g., man overboard situations) +Uses established safe practices to work the gear effectively and looks for improvements +Shoots and hauls gear in a way that minimises risk of damage to the vessel +Checks the engine (oil, fuel, filter etc.) according to maintenance schedule	-Works in dangerous proximity to, or within, stated danger zones of vessel -Encourages or allows other team members to break separation guidelines from danger zones -Violates code of good practice/vessel standards -Skips steps in safety protocols -Dismisses others’ safety concerns of non-compliance with procedures -Refuses to participate in emergency drills -Performs unrealistic and/or infrequent emergency drills -Uses broken, old or unfit for purpose equipment -Neglects housekeeping of the boat

## FINS – FISHERS’ NON-TECHNICAL SKILLS

**Planning and preparation:** Planning in order to complete work safely, effectively and efficiently, by managing risk of rushing, distraction or logistical challenges that could hinder task completion. Conducting appropriate checks prior to vessel departure or before a task.

<b>Example behaviours for good practice</b>	<b>Example behaviours of poor practice</b>
<ul style="list-style-type: none"> <li>+Takes the appropriate gear and selects the fishing grounds in line with weather conditions</li> <li>+Establishes and communicates the start and approximate end time of the fishing journey to the rest of the crew</li> <li>+Ensures that the necessary fuel, food, kit etc. are on the boat</li> <li>+Makes sure safety equipment is within its service date, functioning properly, stored correctly and sufficient for all crew members</li> <li>+Ensures that the communication equipment is functioning properly and on correct mode (e.g., VHF on correct channel) and performs a pre-departure radio check</li> <li>+Conducts financial planning to balance safety and profitability</li> <li>+Focuses on the task by monitoring the immediate environment</li> </ul>	<ul style="list-style-type: none"> <li>-Works in isolation without communicating plan to anyone, resulting in confusion regarding overall tasking</li> <li>-Underestimates weather impact by using the same plan irrespective of conditions</li> <li>-Needs to implement delays, workarounds or to abort a task due to missing or inadequate equipment/resources</li> <li>-Becomes obviously distracted during task activities (e.g., checks phone for non-work-related reasons)</li> <li>-Emphasises time pressure and encourages crew to rush to complete tasks</li> <li>-Leaves port before safety checks are conducted</li> </ul>

## FINS – FISHERS' NON-TECHNICAL SKILLS

**Implementing safe lone working strategies:** Employing strategies for minimising the risks associated with lone working according to the Safety Folder or other written risk assessments, where these circumstances cannot be avoided due to various considerations e.g., economic aspects or practical constraints.

<b>Example behaviours for good practice</b>	<b>Example behaviours of poor practice</b>
<ul style="list-style-type: none"> <li>+Registers the PLB with the Coast Guard and sets it up</li> <li>+Uses techniques and devices to help with manual handling or has arrangements to protect back health (e.g., using aids such as cranes, trolleys, back braces or reducing size of equipment or bait)</li> <li>+Uses strategies for compensating for risks of lone working, by working closer to shore, for instance</li> </ul>	<ul style="list-style-type: none"> <li>-Leaves to sea without a specific plan to compensate for risks of lone working (e.g., without a functional PLB or equivalent)</li> <li>-Works alone without a support system</li> <li>-Engages in tasks/actions which are unsafe when attempted alone</li> </ul>

## FINS – FISHERS’ NON-TECHNICAL SKILLS

**PERSONAL RESOURCES MANAGEMENT:** Looking after one’s own wellbeing. Managing pressures and difficulties through personal resources in order to meet task requirements with the minimum level of fatigue and stress. Ensuring balance between task requirements and personal capabilities.

**Managing fatigue and awareness of personal capabilities and resilience:**  
Employing strategies for coping with fatigue in order to maintain concentration. Recognising and minimising personal limitations and adapting tasks accordingly.

Example behaviours for good practice	Example behaviours of poor practice
<ul style="list-style-type: none"> <li>+Rests and shares workload where possible to avoid fatigue</li> <li>+Adapts tasks to age and other personal limitations</li> <li>+Conducts personal assessment of fitness to go out at sea, as well as of health and wellbeing</li> </ul>	<ul style="list-style-type: none"> <li>-Shows signs of tiredness through poor performance (e.g., forgetting instructions)</li> <li>-Combats the lack of rest through narcotics or energy enhancing products</li> <li>-Engages in drink or drug use whilst on duty</li> <li>-Struggles with task due to performing beyond personal capabilities</li> </ul>

**Managing mental health:** Recognising importance of mental health. Employing strategies for coping with various stressors.

Example behaviours for good practice	Example behaviours of poor practice
<ul style="list-style-type: none"> <li>+Shares challenges with third party for mental health reasons</li> <li>+Remains calm in emergency situations</li> </ul>	<ul style="list-style-type: none"> <li>-Works alone for long periods of time doing a routine task, thus being more prone to being affected by financial concerns</li> <li>-Reacts poorly to unexpected changes</li> <li>-Raises voice in anger towards others</li> </ul>

**SITUATION AWARENESS: Building and maintaining an awareness of the environment and conditions. Recognising and understanding information and cues in the environment, then using that information effectively to anticipate future states.**

**Environmental awareness and navigational considerations:** Establishing awareness of elements from the external environment, such as weather, tide, proximity to shore, and gear. Actively collecting data about a situation or circumstances by monitoring the environment and checking a variety of sources. Ensuring quality of navigational information sources and maintaining the navigational lookout if tasked to do so.

Example behaviours for good practice	Example behaviours of poor practice
<ul style="list-style-type: none"> <li>+Consults the weather forecast and checks for further updates</li> <li>+Takes into consideration seabed conditions when navigating e.g., avoids rocky areas with strong winds</li> <li>+Deploys gear in accordance with environmental conditions e.g. the tide</li> <li>+Responds to presence of other vessels in nearby vicinity</li> <li>+Ensures the information on charts is updated with subsea hazards etc. to remain current and relevant</li> <li>+Ensures training is updated with system changes</li> <li>+Pays attention to other sea users, including oil plants and other fixed objects to avoid collisions</li> </ul>	<ul style="list-style-type: none"> <li>-Deploys gear in the line of another water user (e.g., putting pots in the line of a scallop dredger)</li> <li>-Continues to steer vessel towards nearby hazard or vessel</li> <li>-Monitors the weather forecast infrequently</li> <li>-Focuses on a single piece of information/source at the detriment of others</li> <li>-Leaves bridge while on watch</li> <li>-Changes fishing operation/grounds without ensuring that risk assessments and training are updated</li> </ul>

## FINS – FISHERS' NON-TECHNICAL SKILLS

**Avoiding problems by thinking ahead:** Asking 'what if' questions and using the current mental picture to think ahead about actions, consequences and possible future outcomes and taking steps to eliminate issues.

<b>Example behaviours for good practice</b>	<b>Example behaviours of poor practice</b>
<ul style="list-style-type: none"><li>+Anticipates stability issues whilst at sea and takes action to counteract these issues</li><li>+Uses life-saving equipment</li><li>+Implements fail-safe ready methods, such as having a knife available to cut snagged ropes</li><li>+Implements risk management strategies, such as changing the engine to eliminate the need to carry petrol on board</li></ul>	<ul style="list-style-type: none"><li>-Refuses to use life-saving equipment</li><li>-Is unable to find knife when snagged ropes are present</li><li>-Uses the same strategy despite sufficient environmental awareness or navigational considerations</li><li>-Does not recognise information or cues which put the vessel or crew at risk</li><li>-Operates the vessel in a complacent manner, without thinking ahead</li></ul>

**DYNAMIC DECISION MAKING:** Reaching an appropriate judgement about a situation, selecting the most appropriate actions, solving problems, and managing risk.

**Dynamic risk assessment and management:** Evaluating a dynamic situation to identify possible threats, considering potential actions and consequences with the overall aim of managing, or minimising, risk. Adapting actions and decisions in response to changing/dynamic circumstances.

Example behaviours for good practice	Example behaviours of poor practice
<ul style="list-style-type: none"> <li>+Recognises increasingly worse emergency situations and takes corrective action, e.g. evaluating injury severity and seeking medical assistance or providing first aid</li> <li>+Makes informed decisions in emergencies, by thinking about possible consequences</li> <li>+Consistently communicates planned actions and acknowledges the impact of the dynamic scenario on these</li> <li>+Recognises issues based on experience and familiarity with the task, normal operation, vessel etc.</li> </ul>	<ul style="list-style-type: none"> <li>- Continues to work in the same manner despite emergent significant weather changes</li> <li>-Has a delayed response to emerging threats</li> <li>-Makes hasty decisions without considering potential dangers or long-term effects</li> </ul>

**Safe systems of work:** Selecting approach to task and operation, in consideration of safety systems whilst balancing financial considerations.

Example behaviours for good practice	Example behaviours of poor practice
<ul style="list-style-type: none"> <li>+Stands away from danger zones</li> <li>+Makes safe decisions whilst balancing economic pressures, e.g. in terms of total time of operation</li> <li>+Improves the operation for business and safety benefits</li> </ul>	<ul style="list-style-type: none"> <li>-Makes incorrect decisions which lead to damage or loss of vessel</li> <li>-Pushes vessel beyond limits to prioritise economic gain</li> </ul>

**LEADERSHIP: Building a holistic picture of the environment and team actions, overseeing and guiding task activities, ensuring worker wellbeing and safety.**

**Leadership for safety:** Modelling appropriate safety behaviours. Maintaining oversight of worker wellbeing and providing flexible support where needed. Recognising limits and finding balance between safety and productivity.

Example behaviours for good practice	Example behaviours of poor practice
<ul style="list-style-type: none"> <li>+Manages the operation in times of difficulty with safety at the forefront, by adhering to practice and process</li> <li>+Does not continue the operation if the crew indicate or show signs that they are fatigued</li> <li>+Ensures knowledge of the safety system amongst the crew, through team briefings and information checking</li> <li>+Directs crew members in need to mental health charities</li> </ul>	<ul style="list-style-type: none"> <li>-Displays examples of negative work behaviours to the crew, such as working in danger zones</li> <li>-Gives in to pressure related to fishing quota from various sources (e.g., other crew members)</li> <li>-Places pressure related to fishing quota on oneself or other crew members</li> </ul>

**Collaborative leadership:** Fostering a collaborative environment based on transparency, respect and support.

Example behaviours for good practice	Example behaviours of poor practice
<ul style="list-style-type: none"> <li>+Skipper respects crew by maintaining two-way communication (sharing the requirements of the task and ensuring that they understand the task, asking for crew's opinions etc.)</li> <li>+Informs vessel owners/operators where applicable of a decision and/or involves such parties in the decision-making process</li> <li>+Works alongside other crew members when the task requires</li> </ul>	<ul style="list-style-type: none"> <li>-Withholds essential information or refuses to speak up for safety with vessel owners</li> <li>-Provides orders to the crew with no further explanation, in a loud voice</li> <li>-Dismisses safety suggestions</li> </ul>

## FINS – FISHERS' NON-TECHNICAL SKILLS

**Monitoring the operation:** Steadfast leadership. Maintaining an oversight of worker location and progress. Organising the work activities of others to achieve fishing and safety goals. Ensuring others in crew are performing appropriately.

<b>Example behaviours for good practice</b>	<b>Example behaviours of poor practice</b>
<ul style="list-style-type: none"><li>+Guides crew members through difficult circumstances, such as non-routine operations</li><li>+Oversees the entire operation by monitoring worker location and progress</li><li>+Assesses the match between the capabilities of the crew and the conditions</li><li>+Trains and allocates crew members for certain tasks</li></ul>	<ul style="list-style-type: none"><li>-Divides work inefficiently or unevenly</li><li>-Checks on crew sporadically or when issues arise rather than maintaining continuous oversight of the operation</li><li>-Ignores unsafe behaviours</li></ul>

**CREW COMMUNICATION AND TEAMWORK: Sharing information, goals and understanding to facilitate working well with others. Combining activities and effort to reach a shared goal safely and effectively.**

**Communication:** Giving and receiving task and safety relevant information.

Example behaviours for good practice	Example behaviours of poor practice
+Efficiently communicates with other crew members within the same team +Speaks up for safety and feeds into the safety system	-Does not listen or follow the orders of the skipper -Ignores other crew members -Speaks over or interrupts other crew members -Shares information in a manner which is unclear or difficult to follow

**Coordination and teamwork for safety:** Working with others by collaborating and combining tasks to achieve a shared goal. Interacting with others to ensure work is shared appropriately across the team according to skill level and performance influencing factors (such as fatigue or stress). Ensuring the safety of other crew members through team processes.

Example behaviours for good practice	Example behaviours of poor practice
+Rotates the task allocation or adapts the task by considering evolving physical and mental limitations +Works on a specific task based on skills and allocation +Actively checks in on other crew members to see if they are keeping safe	-Works in an individual manner, not supporting others, even when the situation calls for it or when requested -Does not ask for help to share workload -Takes actions which put other crew members in danger

**COMMUNICATION WITH THIRD PARTIES:** Exchanging relevant information with third parties.

**Other boats:** Communicating safety-critical information with other vessels to create a safe system of working.

Example behaviours for good practice	Example behaviours of poor practice
+Works in collaboration with other boats to manage safety, by keeping watch of each other +Keeps AIS (automatic identification system) on +Uses signals and lights (to indicate status or priority of passage, to warn others of presence etc.)	-Keeps AIS off or on low power, thus not being discoverable by shore masts or faraway boats -Does not adhere to ColRegs (Convention on the International Regulations for Preventing Collisions at Sea)

**Authorities and NGOs (non-governmental organisations):** Employing specific communication styles for engaging with other safety stakeholders.

Example behaviours for good practice	Example behaviours of poor practice
+Engages with safety materials from charities +Communicates with emergency services in case of incident +Provides a plan and regular updates to the harbour or Coast Guard	-Does not inform the harbour of plans and status -Keeps accidents unreported, thus hindering learning

**Family and friends:** Sharing plans and regular updates on status with other trusted individuals.

Example behaviours for good practice	Example behaviours of poor practice
+Provides regular updates on whereabouts and makes sure someone knows the time pattern +Informs trusted others of issues which may occur during the operation	-Does not provide specific information which may help search and rescue, such as tidal data and gear -Works without an emergency contact

### Part 3: Use of the FiNS rating system

The FiNS evaluation criteria is shown below. Evaluations can be made at the skill category or element level, ideally this should be a system of building up to an overall category rating based on combined element ratings. To make ratings it is best to watch fisher(s) during a task or activity, making notes on specific observed behaviours, which can then be converted into optimal/sub-optimal ratings afterwards. All skill elements (17) and categories (7) are scored using the same criteria shown in the table below. Rating forms are provided at the end of this booklet.

Before using this system for teaching and assessment it is important that the rater has spent some time with the rating scale, has a basic understanding of human factors and knows when the system can be used safely (so that the process of rating does not distract or interrupt workers). It is also important that the fisher being assessed has some knowledge of the FiNS system, understands how the system may benefit him / her and is provided with clear feedback on any / all evaluations.

#### FiNS rating options

- **Optimal – Very good, good, or acceptable behaviours.** Should be used when behaviours enhance or do not endanger fisher safety. Areas of particularly good practice can be highlighted in feedback forms for very good behaviours which optimally enhance fishing safety. Conversely, areas of improvement should be highlighted for acceptable behaviours.
- **Sub-optimal – Marginal or poor behaviour.** Should be used when behaviours could endanger or directly endanger fisher safety. Causes of concern and remedial actions should be highlighted in feedback forms.
- **N/R – Not required.** Skill not observed as not relevant for situation / activity.

Not all skills may be required for every observed situation – for example if observing a lone worker, you will not observe teamwork behaviours. The poor behaviour should have been seen, or the absence of a required behaviour should have been noted, to provide a rating of sub-optimal. Rating N/R simply indicates the behaviour was not needed within the specific situation observed.

Remember – the lists of behaviours are not exhaustive, rather they are an indication of the types of behaviours you might see. You may well observe other behaviours not mentioned within FiNS that you will be able to rate and assign to a category / element.

## FINS – FISHERS’ NON-TECHNICAL SKILLS

### SAMPLE RATING FORM FOR FiNS

Vessel.....Trainer/assessor.....Crew member.....Date.....

Skill category	Rating	Element	Rating	Feedback
Task and boat management		Following regulatory safety standards and the vessel rules, practice and protocol		
		Planning and preparation		
		Implementing safe lone working strategies		
Personal resource management		Managing fatigue and awareness of personal capabilities and resilience		
		Managing mental health		

## FINS – FISHERS' NON-TECHNICAL SKILLS

<b>Situation awareness</b>		<b>Environmental awareness and navigational considerations</b>		
		<b>Avoiding problems by thinking ahead</b>		
<b>Dynamic decision making</b>		<b>Dynamic risk assessment and management</b>		
		<b>Safe systems of work</b>		

## FINS – FISHERS' NON-TECHNICAL SKILLS

<b>Leadership</b>		<b>Leadership for safety</b>		
		<b>Collaborative leadership</b>		
		<b>Monitoring the operation</b>		
<b>Crew communication &amp; teamwork</b>		<b>Communication</b>		
		<b>Coordination and teamwork for safety</b>		
<b>Communication with third parties</b>		<b>Other boats</b>		
		<b>Authorities and NGOs</b>		
		<b>Family and friends</b>		

