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HSBI BYCATCH MITIGATION MEASURING GUIDE

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Voluntary HSBI Regional Guides

TOOLS FOR HIGH SEAS BOARDING AND INSPECTIONS

DRAFT

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TOOLS FOR HIGH SEAS BOARDING AND INSPECTIONS

Bycatch Mitigation Measuring

Document History

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PURPOSE STATEMENT

1. This document provides guidance to Authorised inspectors conducting WCPFC High Seas Boarding and Inspections (HSBI¹) on:
 - assessing bycatch mitigation measures that require quantifiable measurements and
 - the minimum standards for taking and recording measurements

COMMENTS

USA suggestion because this guide does not include a comprehensive list of how to assess all bycatch mitigation measures. Instead, it is focused on those that need to be quantifiably measured. We suggest this is very clear throughout because otherwise, the guide seems incomplete given its focus on only some mitigation measures

¹ HSBI, refers to boarding, inspection, and related activities on the high seas within the Convention Area conducted pursuant to CMM 2006-08 Western and Central Pacific Fisheries Commission Boarding and Inspection Procedures or any successor CMM.

2. The development of this Guide aims to support a consistent approach to the monitoring of bycatch mitigation measures on the high seas in such cases where the bycatch mitigation measure requires a quantifiable measurement (e.g., length or weight).

COMMENTS

USA suggestion

3. The application of this Guide will be voluntary and apply to authorised HSBI activities within the WCPFC Convention Area.
4. This guide should be modified in response to future amendments to bycatch mitigation measures for any species and emerging technologies. It is expected that this guide will continue to evolve as the field develops.

COMMENTS

USA suggestion

Assessing bycatch mitigation measures in WCPFC HSBI activities.

5. The aim of HSBI is to ensure a vessel is compliant with the WCPFC Convention and all applicable WCPFC Conservation and Management Measure (CMM) obligations.
6. Authorised inspectors conducting HSBI activities should inspect required bycatch-catch mitigation measures (and equipment) that are on board, being used, or are available for use, including to:
 - confirm presence or absence of bycatch mitigation methods
 - confirm application of bycatch mitigation methods by trip
 - verify configuration and construction of bycatch mitigation methods
 - record condition of bycatch mitigation methods
7. Inspecting and recording bycatch mitigation measures (and equipment) during HSBI activities assesses compliance with CMMs for:
 - Seabirds,
 - Shark,
 - Cetaceans,
 - Sea Turtles, and
 - Mobula Rays
8. Authorised inspectors are to be fully familiar with the provisions of the CMMs in force on bycatch mitigation measures, including with respect to any areas of application with obligations. These should be taken into consideration with the vessel's current trip operations.

COMMENTS

Australia - drafted addition from a suggestion by China regarding applicability of inspections with the vessel operations.

~~8.9.~~ Inspecting and recording bycatch mitigation measures during HSBI activities, can provide the flag CCM with vessel and fishing trip level compliance with bycatch related CMMs.

Bycatch mitigation measuring Minimum Standards

~~9.10.~~ The general principles and procedures for taking measurements of bycatch mitigation measures in HSBI:

a) Documentation and records

~~10.11.~~ Authorised inspectors should:

- document any measurements taken using a recording device, including photographs and videos.
- Take any measurement with witness' present (Authorised Inspectors, master, crew, boarding party), and prioritise that witnesses from the fishing vessel are present.
- ideally work in pairs
- inspect the Vessel Master's notes including fishing vessel operation tracking and the daily catch and effort records.

COMMENTS

EU suggestion to include these documents as a relevant source of information

~~11.12.~~ The HSBI report should record bycatch mitigation measure information. The authorised inspector should record as much as possible, including but not limited to the following information:

- Date of the inspection
- Vessel name
- Vessel coordinates
- Bycatch mitigation methods (Annex 1):
 - used by vessel
 - measurements (including unit of measurement).

~~12.13.~~ The master of the vessel must be provided with an interim copy of the report which includes detail of any bycatch mitigation methods and measurements. The master must also be given to opportunity to include any objection or comment to be included in the final report.

b) Equipment

- Tape measure and weighing scales
- Photo and video recorder
- HSBI report / recording information materials

Collection and analysis of bycatch mitigation measures for Seabirds

Weighted branch lines

~~13.14.~~ Branch lines are to be weighted accordingly, based on the distance from the hook.
Authorised Inspectors should:

- measure the distance from the weight² to the eye (top) of the hook

COMMENTS

Japan suggestion

NZ - Suggest that members using non-standard methods to weight line should be able to demonstrate compliance with current line weighting specifications. Suggest that this footnote is instead used to note the current specification for weighted branch lines instead. Otherwise, other types of weights may also need to be considered, i.e. in addition to luminous weights - lead, sliding, and swivel weights.

- document the packages of weights on board
- document the weights showing weight amount if readable
- use scales to weigh individual weights.

Tori lines

~~14.15.~~ Tori lines specifications are dependent on the total length of the vessel (on the RFV and confirmed via the ships documents) and applicable areas on the high seas of the WCPFC Convention Area (i.e. North of 23 North and South and 25 South). [Refer to Annex 1. Example HSBI report template/inspection checklist - seabird mitigation measures.](#)

COMMENTS

Australia moved from end of Tori lines section, to paragraph 15 'Refer to Annex 1 for tori line specifications depending on area of fishing and total length of the fishing vessel'

~~15.16.~~ Space is limited when measuring a tori line at-sea, however, an indicative assessment of length can be achieved using mathematical techniques. To measure the tori line, authorised inspectors should:

- choose and clear an area on the vessel deck, running along the vessel is often an open and clear space
- measure the area on the vessel deck
- lay the tori line out in sections along this length (back and forth)
- measure to confirm length of sections
- count number of lengths
- measure overage piece of line leftover
- calculate overall length of tori line e.g. 10 sections of line, measuring 15m = 150m tori line length (plus any overage)

² ~~Authorized inspectors should note that some vessels use luminous weights with plastic exteriors that do not appear to be weights at first glance to weigh branch lines. The minimum specifications for weighted branch lines are a. one weight greater than or equal to 40g within 50cm of the hook; or b. greater than or equal to a total of 45g attached to within 1m of the hook; or c. greater than or equal to a total of 60g attached to within 3.5m of the hook; or d. greater than or equal to a total of 98g weight attached to within 4m of the hook.~~

- Measure both tori lines if the vessel has two.

[Insert Reference to AFMA/Te Patui tori line measuring at sea youtube video].

~~Refer to Annex 1 for tori line specifications depending on area of fishing and total length of the fishing vessel.~~

Tori line streamers

~~16.17.~~ Authorised inspectors should:

- measure distance between long streamers
- measure distance between short streamers
- measure the first long streamers from the start of the tori line that meets the attachment point
- measure from attachment point to the first long streamer
- measure and record the length of [at least x] long and short streamers.

Tori pole

~~17.18.~~ The tori pole or attachment point is where the tori line is deployed from. Authorised inspectors should:

- measure from top of tori pole (estimate) or attachments point to the sea surface.

Night Setting

~~18.19.~~ Depending on the area of fishing, night setting may be an approved seabird mitigation measure. Information on mitigation measures may be recorded in the vessels' Daily Catch and Effort Records or the ships log. Where night setting is declared, Authorised inspectors should:

- identify the start time and end time of setting, ~~as recorded in the Daily Catch and Effort Records~~

COMMENTS

Japan suggests deleting because end time of setting is not required to be recorded
NZ - Agree removing "as recorded in the Daily Catch and Effort Records"

- identify the time of nautical dawn and dusk using a nautical almanac
- identify if setting of fishing gear has occurred after nautical dawn or before nautical ~~dusk~~; dusk using vessel records.

Hook-shielding devices

~~19.20.~~ Hook shielding devices may be used as a stand along seabird mitigation measure. Where identified, authorised inspectors should:

- identify if hook shielding devices are used on all gear (full or partial)
- measure and record the weight of the hook shielding device and distance to the eye (top) of the hook.

COMMENTS

Australia added for consistency - would imagery help this description?

Management of offal discharge

~~20.~~21. Management of offal discharge is permitted as a seabird mitigation measure where fishing occurs north of 23° North. Where management of offal discharge is identified, Authorised inspectors can speak with the master and crew to record fishing practices during setting and/or hauling.

Blue dyed bait

~~21.~~22. Where blue dyed bait is identified as used, Authorised inspectors should:

- confirm that bait used is fully thawed when dyed
- compare the colour of dye to the vessel placard showing the colour to which bait is to be dyed (provided by the Commission Secretariat).

Deep setting line shooter [Possible inclusion]

Accessibility of bycatch mitigation measuring and multi-language information

To assist the bycatch mitigation measuring process during HSBI activities, it would be beneficial for these procedures to be translated into languages that are in use on fishing vessels and/or as pictographs to bridge any language barriers.

The following supporting documentation should be considered for translation by CCMs:

- HSBI Multi-language cards
- Measuring of bycatch mitigation measure procedures translated into flag CCM languages, provided online.
- Measuring of bycatch mitigation measure procedures given/shown to master of vessel by HSBI Authorised inspectors.

In addition, flag CCMs should also consider providing information about measuring bycatch mitigation measure procedures that may be used during HSBI inspections to their fishing vessels in a language(s) used by their vessels.

Annex 1. Example HSBI report template/ inspection checklist - seabird mitigation measures

Tori Line for vessels $\geq 35\text{m}$ total length and below 25° South (WCPFC CMM 2018-03, Annex 1,1a)			
<p align="center">Image of a tori line</p> <p align="center">[Schematic needs to fully reflect WCPFC requirement, i.e. clear differentiation between long/short streamers, aerial extent, and total length]</p>			
Inspection Theme	Inspection Note	Inspector Comment	
Tori Line General Specifications	Did the vessel have at least one tori line?	<p>Has the vessel been fishing below 25° South <u>during the inspection trip</u>? Y/N</p> <p><u>Does the vessel have a tori line?</u> Y/N</p> <p>Number of tori lines examined?</p> <p><i>COMMENT: NZ - Suggest language from 'inspection' to 'current fishing' trip, and does the vessel have... included for consistency</i></p>	

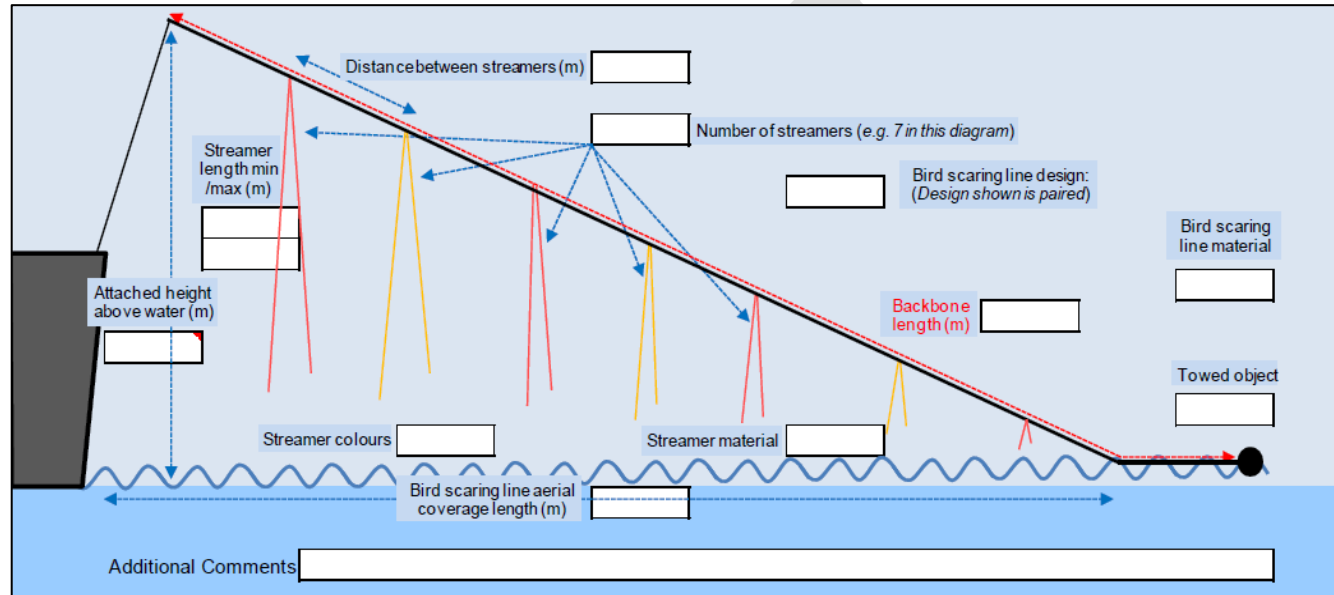
	Long/Short Streamers	Does the tori line have long and short streamers? (Y/N)	
	Streamer Colour	Are streamers brightly coloured? <u>Y/N</u> Colour of streamers:	
	Overall tori line length	What is the overall length (m) of the tori line? Is the tori line at least 200m in total length?	
	Aerial Extent	Over what length (m) are streamers included over the total length of the tori line? <u>If observed, does the aerial extent of the tori line meet at least 100m? Y/N</u> COMMENT: NZ - Suggested addition to capture aerial extent requirement. <u>Are streamers included over the at least the first 100m of the tori line? (Y/N)</u> COMMENTS: <i>Japan suggest deleting as there is no such obligation articulated in 1a), 1. of Annex1 of the CMM. iii of 1a) only says that “Vessel shall deploy the tori line to achieve a desired aerial extent greater than or equal to 100m.”</i> <i>NZ - Can accept deletion due to not being explicit within the Annex 1 specifications. Note however that in order for the tori line to be compliant, all aerial extent must have streamers which comply with 1a)ii a & b (long and short streamer specifications).</i>	
	Tori Pole	<u>Does the vessel have a tori pole? Y/N</u> What is the height (m) at which the tori line is secured? Is the height greater than 7m from the sea surface? (Y/N) COMMENT: AU – Suggest including	
	Streamer Spacing	What is the distance (m) between long streamers?	

Long Streamer Specifications		Are streamers spaced no more than 5m apart? (Y/N)	
	Long Streamer Swivels	Are swivels used to secure the long streamers to the tori line (Y/N)	<p>We note that New Zealand's tori lines connect the mainline and streamers using a rope loop—a triangular loop formed by a knot—to which the long streamers are tied. If this design format is considered a “swivel,” China can agree. China's tori lines have already been modified in accordance with the design provided by New Zealand delegation during the 2024 China–New Zealand bilateral talk, including the style of connecting the mainline to the streamers.</p> <p>COMMENT: China suggestion NZ - This column is intended for inspector comments, suggest removal but note China's comment.</p>
	Long Streamer Length	<p>What is the length (m) of long streamers used?</p> <p>Are long streamers likely to reach the sea surface <u>when the sea is calm over the length of the aerial extent</u>? (Y/N)</p> <p>COMMENT: China suggestion NZ - Agree</p>	
Short Streamer Specifications	Streamer spacing	<p>What is the distance (m) between short streamers?</p> <p>Are streamers spaced no more than 1m apart? (Y/N)</p>	
	Short Streamer Length	<p>What is the length (m) of short streamers used?</p> <p>Are short streamers greater than 1m in length? (Y/N)</p>	

Tori Line for vessels <35m total length and below 25° South (WCPFC CMM 2018-03, Annex 1,1b)

Image of a tori line

[Schematic needs to fully reflect WCPFC requirement, i.e. clear differentiation short streamers, aerial extent, and total length]



Inspection Theme	Inspection Note	Inspector Comment	
Tori Line General Specifications	Did the vessel have at least one tori line?	Has the vessel been fishing below 25 South? Y/N <u>Does the vessel have a tori line? Y/N</u> Number of tori lines examined? COMMENT: NZ included for consistency	
	Long/Short Streamers	Does the tori line have short streamers? (Y/N) <u>and/or</u> Does the tori line have long streamers? (Y/N) COMMENT: Japan suggest adding and/or, in order to avoid confusions. Vessels >=35m total length	

		<i>need to attach short or long streamer to the tori line. Either a short or long streamer must be used. NZ agree</i>	
	Streamer Colour	Are streamers brightly coloured? Colour of streamers:	
	Overall tori line length	What is the overall length (m) of the tori line?	
	Aerial Extent	Over what length (m) are streamers included over the total length of the tori line? Are streamers included over the at least the first 75m of the tori line? (Y/N)	
	Tori Pole	<u>Does the vessel have a tori pole? Y/N</u> What is the height (m) at which the tori line is secured? Is the height greater than 6m from the sea surface? (Y/N) <i>COMMENT: AU suggest including</i>	
Long Streamer Specifications	Streamer Spacing	What is the distance (m) between long streamers? Are streamers spaced no more than 5m apart? (Y/N)	
	Long Streamer Swivels	How are long streamers secured to the tori line?	
	Long Streamer Length	What is the length (m) of long streamers used? Are long streamers likely to reach the sea surface <u>when the sea is calm over the length of the aerial extent?</u> (Y/N) <i>COMMENT: China suggestion (as above for consistency) NZ – Agree</i>	
Short Streamer Specifications	Streamer spacing	What is the distance (m) between short streamers? Are streamers spaced no more than 1m apart? (Y/N)	
	Short Streamer Length	What is the length (m) of short streamers used? Are short streamers greater than 1m in length? (Y/N)	

Night setting (WCPFC CMM 2018-03, Annex 1, 4)			
Inspection Theme	Inspection Note	Inspector Comment	
Night Setting	Night Setting Applicable	Has the vessel been fishing below 30 South? Y/N Does the vessel indicate use of night setting? (Y/N)	
	Setting Times	Does the vessel set fishing lines after nautical dawn and before nautical dusk? (Y/N) <u>Has Daily catch and Effort Records been provided to examine Night Setting? Y/N</u> COMMENT: NZ suggestion including reference to Daily Catch and Effort Records	
		Hook-setting What is the start time of setting: What is the time of nautical dawn and/or nautical dusk at the operation latitude/longitude) <u>Actual local sunrise time at the operation latitude/longitude:</u> Hook What is the end time of setting end time: What is the Duration of night-time hook setting: What Duration of setting is after nautical dawn/before nautical dusk: <u>post-sunrise hook setting:</u> What is the Ratio of night-time to daytime hook-setting duration: ³ COMMENT: China suggestion NZ – Have amended terminology to be consistent with the remainder of the inspection guideline and also CMM.	

³ Where times are recorded, specify what time zone is being used.

		<i>Note however that during a HSBI, obtaining all of this information may be impractical for authorised inspectors.</i>	
	Deck Lighting	Is deck lighting kept to a minimum (note lights should not breach minimum standards for safety and inspection) (Y/N)	Annex 1,4(iii)

Weighted Branch Lines (WCPFC CMM 2018-03, Annex 1, 5)			
Inspection Theme	Inspection Note	Inspector Comment	
Weighted branch line	Application	<p>Has the vessel been fishing below 25 South? Y/N</p> <p>If a tori line or night setting was not used on set process, Ddoes the vessel use of weighted branch lines? (Y/N)</p> <p>Are weighted branch lines used on all fishing gear? (Full, Partial, No)</p> <p>COMMENT: China suggestion</p> <p>NZ - Suggest revert back to original as the intention here is to record what is present during an inspection. This will also keep the inspection guideline as simple as possible. Potential reference to sole/dual/mixed seabird mitigation measures can be documented in the inspector comments column.</p>	
		<p>Has the vessel been fishing below 30 South? Y/N</p> <p>What is Rthe ratio of night-time to daytime hook-setting-duration:</p> <p>What is the Nnumber of weighted branch lines:</p> <p>What is the Nnumber of unweighted branch lines:</p> <p>What is the Rratio of weighted to unweighted branch lines:</p> <p>Does the ratio of unweighted to weighted branch lines match the ratio of night-time to daytime hook-setting duration?Y/N</p>	

		<p>COMMENT: China suggestion NZ - Suggest removing reference to 30 South as weighted branch lines can be used below 25 South. Similar to practicality comment above, note that this may be impractical to obtain during the limited time of a HSBI. At a minimum, the reference to Full/Partial/No weighted branch lines has been included to provide an initial indication.</p>	
	Specification	<p>Do weighted branch lines meet minimum weight and length specifications? At least 40g within 50cm of the hook? At least 45g within 1m of the hook? At least 60g within 3.5m of the hook? At least 98g within 4m of the hook?</p>	

Hook Shielding devices (WCPFC CMM 2018-03, Annex 1, 6)			
Inspection Theme	Inspection Note	Inspector Comment	
Weighted branch line	Application	<p>Has the vessel been fishing below 25 South? Y/N Does the vessel use of hook shielding devices? (Y/N) Are hook shielding devices used on all fishing gear? (Full, Partial, No)</p>	
	Specification	What is the weight (g) of the hook shielding device?	

Tori Lines North of 23° North (WCPFC CMM 2018-03, Annex 1, 2a, b, and c)			
Inspection Theme	Inspection Note	Inspector Comment	
	Application	Has the vessel been fishing above 23 North? Y/N	

Tori Line General Specifications		<p><u>Does the vessel have a tori line? Y/N</u></p> <p>Number of tori lines examined?</p> <p><i>COMMENT: NZ suggestion to align with other guidelines</i></p>	
	Minimum Length	<p>What is the overall length (m) of the tori line?</p> <p>Is the tori line at least 12200m in total length?</p> <p><i>COMMENT: JP correcting length</i></p>	
	Attachment Point	<p>What is the height (m) at which the tori line is secured?</p> <p>Is the height greater than 5m from the sea surface? (Y/N)</p>	
Long Streamers	Streamer Spacing	<p>What is the spacing between long streamers?</p> <p>Is the interval between long streamers less than 5m?</p>	
	Streamer specifications	<p>How are the long streamers secured to the tori line?</p> <p>Are long streamers secured using swivels?</p> <p>Are long streamers as close to the water as possible?</p>	
Short Streamers	Streamer Spacing	<p>What is the spacing between streamers?</p> <p>Is the interval between short streamers less than 1m?</p>	(Note only encourage where the vessel is <24m total length).
	Streamer specifications	<p>What is the length of short streamers?</p> <p>Are streamers at least 30cm in length?</p>	(Note only encourage where the vessel is <24m total length).

Side Setting with bird curtain and weighted branch lines (WCPFC CMM 2018-03, Annex 1, 3)			
Inspection Theme	Inspection Note	Inspector Comment	
General Specifications	Application	Has the vessel been fishing above 23 North? Y/N Does the vessel side set and use a bird curtain? Y/N <i>COMMENT: NZ suggestion to align with other guidelines</i>	
	General Requirements	Is the mainline deployment deployed from port or starboard side as far from the stern as possible? (at least 1m) Is a mainline shooter used? If so, must be mounted at least 1m forward of the stern.	
	Bird Streamers	Is bird curtain: Pole left aft of line shooter at least 3m long? <i>COMMENT: Japan editorial correction</i> Has a minimum of 3 main streamers attached to upper 2m of pole. Y/N What is the diameter of the streamers? Is the diameter of the main streamers at least 20mm? Y/N What is the diameter of branch streamers? Is the diameter of the branch streamers at least 10mm? Y/N Are the branch streamers long enough to drag on water?	

Management of offal discharge (WCPFC CMM 2018-03, Annex 1, 7)			
Inspection Theme	Inspection Note	Inspector Comment	
General Specifications	Application	Has the vessel been fishing above 23 North? Y/N	
	General Requirements	Does the vessel discharge offal during setting or hauling? Y/N If Yes, is offal discharged from the opposite side of the boat to setting/hauling?	

Blue-dyed bait (WCPFC CMM 2018-03, Annex 1, 8)			
Inspection Theme	Inspection Note	Inspector Comment	
General Specifications	Application	Has the vessel been fishing above 23 North? Y/N	
	General Requirements	<p>Is bait used frozen or thawed? <u>Does the vessel use dyed bait? Y/N</u></p> <p>Does the vessel have a placard showing the standardised colour of bait?</p> <p>COMMENT: NZ suggestion to align with other guidelines Japan suggests removing because the bait must be thawed when it is dyed. The question is not in line with the requirement of the CMM. NZ suggest to capture if dyed baits are used, suggest change to “Does the vessel use dyed bait?”</p>	

Deep setting line shooter (WCPFC CMM 2018-03, Annex 1, 9)			
Inspection Theme	Inspection Note	Inspector Comment	
General Specifications	Application	Has the vessel been fishing above 23 North? Y/N	
	General Requirements	<u>Does the vessel use a deep setting line shooter? Y/N</u>	
		What is the depth(m) of hooks set by the deep setting line shooter? Is this depth at least 100m? Y/N	