

MEETING REPORT

2019 REGIONAL LEATHERBACK BYCATCH PRIORITIZATION WORKSHOP

17 - 18 MARCH 2019
PARAMARIBO, SURINAME



WIDECAST TECHNICAL REPORT 18

2019

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Copies of this publication may be obtained from:

Dr. Karen Eckert, Executive Director
Wider Caribbean Sea Turtle Conservation Network (WIDECAST)
6116 High Meadow Drive, Godfrey, Illinois 62035 USA
Tel: (314) 954-8571 / keckert@widecast.org
Online at www.widecast.org

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INTRODUCTION

Previous assessments of the status of the Northwest Atlantic (NWA) leatherback sea turtle (*Dermochelys coriacea*) population concluded that the species in this regional management unit (RMU) was stable, possibly even increasing (TEWG, 2007; Tiwari et al., 2013a). However, a more recent effort supported by the National Fish and Wildlife Foundation (NFWF) involved the pooling of data from members of the Northwest Atlantic Leatherback Working Group¹, hereafter the Working Group, revealed declining regional trends (based on annual nest counts) at both site-level and regional scales, and during both long-term (1990-2017) and recent (2008-2017) time periods (Northwest Atlantic Leatherback Working Group, 2018).

The Northwest Atlantic Leatherback Working Group (2018) discussed drivers associated with declining leatherback population trends in the context of factors that may have changed or may not have been sufficiently addressed in earlier assessments, and concluded that, “Off nesting beaches, particularly near Trinidad and the Guianas, net fisheries interact with leatherbacks and in high numbers (~3,000/yr according to Lee Lum, 2006; Eckert, 2013) [and that] these high levels of leatherback bycatch near key nesting beaches during the nesting season is likely a primary driver of estimated declines in abundance.”

In addition to threatening gravid females off nesting beaches, fisheries bycatch is a documented threat to leatherbacks on the high seas (Wallace et al., 2013; Fossette et al., 2014), including high-latitude foraging areas (Hamelin et al., 2017; Chambault et al., 2017). While acknowledging significant efforts previously invested in testing techniques to reduce leatherback bycatch in net fisheries in Trinidad (Eckert and Eckert, 2005), the Working Group noted that, in general, bycatch in the region is poorly monitored and significantly underreported, and enforcement of existing regulations is generally weak or non-existent (Northwest Atlantic Leatherback Working Group, 2018).² These gaps have stymied efforts to identify priorities for monitoring, reporting, and conservation measures at a regional scale. Such a prioritization effort is essential to highlight opportunities for immediate action, major data and information gaps, and to facilitate exchange of knowledge in order to successfully reduce bycatch.

WWF Guianas responded to this need by organizing and hosting a Regional Leatherback Bycatch Prioritization Workshop in March 2019 in Paramaribo, Suriname. The workshop included participants from Suriname, French Guiana, Guyana, Trinidad, Canada, and USA (see Annex 1). Participants from government agencies, fisheries organizations, and conservation groups gathered to exchange and discuss data and information on bycatch issues in the southern latitudes of the Wider Caribbean Region (see Annex 2). National and regional priorities were discussed and prioritized, and recommendations made for reducing fisheries interactions and bycatch related to the Northwest Atlantic leatherback population, with special attention to interaction near nesting beaches, foraging grounds, and migratory routes.

The purpose of this report is to organize and present for distribution some of the highlights of the March 2019 workshop, including national presentations, plenary discussions, and insights into national and regional priorities as revealed by structured small group discussions and plenary consensus.

¹ The NWA Leatherback Working Group is comprised of experts from 19 Wider Caribbean countries and territories (and Canada); see Northwest Atlantic Leatherback Working Group (2018) for additional detail.

² In French Guiana, conservation actors are working with the French Navy (Action de l'Etat en Mer) and the Marine Affairs to fight against Illegal, Unreported and Unregulated (IUU) fishing, which also contributes to bycatch and mortality of leatherback turtles in the region.

OBJECTIVES

The general objective of the Regional Leatherback Bycatch Prioritization Workshop (hereafter, the workshop) was to identify regional and national priorities for leatherback bycatch reduction in Trinidad and the Guianas.³ To this end, the main question asked of workshop participants was, “What are the priority actions that we need to take in order to address bycatch and reverse the current trends of decline in the regional nesting population of leatherback turtles?”

The workshop objective on Day 1 was to share and summarize the current state of knowledge about leatherback bycatch in the region from various national perspectives. The workshop objective on Day 2 was to establish national and regional priorities for bycatch reduction, including synthesizing baseline information across countries in an attempt to identify key bycatch issues and concerns, gaps in knowledge or capacity (and especially gaps that are currently obstacles to the implementation of bycatch monitoring or reduction actions), and action priorities.

This report briefly summarizes the information and data shared and group discussions, highlights regional priorities, and articulates next steps. The report first summarizes the meeting proceedings from Day 1 (March 17) including country presentations, in order to establish the current state of knowledge about leatherback bycatch in the region. The report next summarizes the meeting proceedings from Day 2 (March 18), including the structure and results of working group activities and plenary discussions. Finally, the resulting priorities for leatherback bycatch monitoring and mitigation in the region are presented. Five annexes are provided, including a Participant List (Annex 1), Meeting Agenda (Annex 2), and Working Group Results (Annex 3, 4).

WORKSHOP PROCEEDINGS: 17 MARCH 2019

Opening Remarks

Hanneke van Lavieren, WWF Guianas Oceans & Wildlife Coordinator, represented the Director of WWF-Guianas. Van Lavieren welcomes the participants and communicated the objectives of the meeting, which was followed by an explanation of the agenda for the day by Avanaisa Turny. An introductory presentation by Bryan Wallace (Ecolibrium, Inc.) stipulated the need and urgency to advance leatherback bycatch reduction techniques at both national and regional scales. The presentation captured the events preceding the meeting (see Northwest Atlantic Leatherback Working Group, 2018), the importance of addressing bycatch with an aim to reduce steep population declines in key nesting assemblages, and the expected outcomes of the meeting from the perspective of the donor, the National Fish and Wildlife Foundation.

Wallace explained that members of the Wider Caribbean Sea Turtle Conservation Network (WIDECAST) had become concerned about anecdotal information and reports from the field describing declines in nesting abundance, and they questioned whether the official IUCN Red List status for the NWA leatherback subpopulation (at that time listed as “Least Concern” in Red List parlance) was a good fit. Since an official re-assessment would be required to adjust

³ Bycatch Regional Workshop documents, including all PowerPoint presentations, are archived at <http://www.widecast.org/who-we-are/annual-meeting/2019-annual-general-meeting/>

the status, the Northwest Atlantic Leatherback Working Group was formed to perform an analysis of annual nesting trends since the 1990s and the re-assessment of this population's status under IUCN Red List criteria⁴. The analysis embraced 39 sites across 17 countries, and documented long-term and recent declines at several individual nesting sites, across all genetic stocks, and for the regional population, with the largest declines at some of the world's most important nesting sites, particularly French Guiana (Northwest Atlantic Leatherback Working Group, 2018).

The Working Group described three categories of drivers of the declines: 1) anthropogenic, which included bycatch near nesting sites, on migratory routes, and in foraging areas; 2) habitat loss, which included anthropogenic drivers and natural cycles; and 3) demographic and behavioral changes, such as longer remigration intervals, long-term cycles and variation in recruitment and breeding periodicity (Northwest Atlantic Leatherback Working Group 2018). Temporal and spatial overlap of turtles and fisheries, in the absence of bycatch reduction methods and devices, increases the probability of interaction – and bycatch near nesting sites was identified as the primary threat due to its high potential to cause significant mortality to breeding-age adult turtles (e.g., see Eckert, 2013 for a discussion related to Trinidad).

Questions and answers:

Q: Marie Louise Felix (St. Lucia) on bycatch data availability.

A: For the assessment the working group used aggregated published data and connected the dots based on the data available. Data came from Project Global (Duke University), shipboard observer data, and bycatch data collected at landing sites. Data from different fisheries and different collection methods was used, but the main focus was on gillnets. Actual data were used, without extrapolation for nesting and or bycatch rates.

Q: Laurent Kelle (French Guiana): How did you assess the trends for the fisheries; temporal aspects to the trends?

A: The annual nesting abundance over the past 28 years was analyzed and the trend was assessed showing an average of 4% annual decline for the last 10 years over all nesting sites. Oceanographic and fisheries trends were not assessed. This resulted in a quick overview of where to focus conservation and bycatch reduction efforts, thus near nesting sites. During the WIDECAST Annual Meeting (convened 19-21 March at the same venue) this would be discussed in depth by Bryan Wallace.⁵

Comment: Karen Eckert: Dr. Eckert expressed concern that “we’ve seen this before” with the sudden decline in globally significant nesting assemblages, for example eastern and western Pacific populations have also endured >90+% declines in nesting – and have not recovered. We know that dramatic losses of reproductively active adults are difficult if not impossible for slow-growing, late-maturing species like sea turtles to recover from. This workshop provides a unique venue to focus on the threat posed by fisheries interactions, and to propose and prioritize solutions.

⁴ As a result of this new analysis, the NWA Leatherback subpopulation is now categorized as “Endangered” on the IUCN Red List (Northwest Atlantic Leatherback Working Group, 2019)

⁵ WIDECAST Annual Meeting documents, including all PowerPoint presentations, are archived at <http://www.widecast.org/who-we-are/annual-meeting/2019-annual-general-meeting/>

Country Presentation: Suriname

Presenters:

Michael Hiwat (WWF Guianas, Suriname Office) reviewed sea turtle nesting data and trends, threats to sea turtle survival, and data related to sea turtle bycatch in local gillnet fisheries.

Mario Ijsspol (Department of Fisheries, Suriname) provided a quick overview of the fisheries of concern for bycatch reduction, licenses, regulations, and regulatory gaps.

- Lines on the map define the following:
 - Yellow line: 15 fathom: artisanal fisheries
 - Between yellow and pink line: Sea-bob fisheries
 - Between pink and the red line (650 miles), most industrial fishing.
- Major data gap: There is no assessment for Suriname of IUU fishing on turtle bycatch.
- Based on 20-80% rule: 600 gillnet vessels engage in IUU fishing.
- IUU fishing is of great concern, as it is getting harder for fishermen to export their fish (they are losing market access).
- Legislation is in place for marine mammals, turtles, and other Endangered Threatened and Protected (ETP) species.
- Enforcement is inefficient, due mainly to lack of staff, finances, knowledge capacity, and technical capacity
- Infrastructure is present so that data could be processed in a reliable way.

Hanneke Van Lavieren and Kim Sys (WWF Guianas) presented on bycatch priorities, bycatch reduction efforts, and the results of several bycatch studies done in 2006, 2012 and 2015-2016 in Suriname, through data collection protocols at landing sites for gillnet fisheries.

Tomas Willems (FAO-REBYC-II LAC Project Coordinator) presented on the development process of turtle bycatch reduction devices in trawl fisheries, including the so-called “cable TED” (Turtle Excluder Device).

- 1999: TED use is mandatory in order to export shrimp to the USA.
- For fish trawlers, there is no TED obligation and no TED is used currently.
- Sea-bob trawlers: use the 4” bar TED under the Marine Stewardship Council (MSC) certification. Trials with the 3” bars also produce a successful result; i.e., high retention of target catch (sea-bob) and valuable bycatch. Lesser bycatch of non-valuable species (e.g., rays). The 2” bar TED (known colloquially as the “TTED” = Trash and Turtle Excluder Device) resulted in a loss of valuable bycatch (non-target catch).
- In fish trawling there is no TED use. Collaborative efforts are s with the US National Oceanic and Atmospheric Administration (NOAA) on the development of and trials with a flexible cable TED which can be rolled up on the net drum. Tow time is 2-3 hr.
 - Results: 75% of rays were excluded from the catch, no turtles were caught, 20-30% of the fish catch was lost.
- In the USA, the flexible TED works well, but not in Suriname. We will continue until we get a workable percentage (near 100%) for retention of target catch. The benefits for fishermen need to be obvious to ensure compliance; enforcement is weak and costly.

Henk Bhagwandin (Adekus) of Conservation International-Suriname presented on a pilot project related to fisheries improvement methods in artisanal fisheries; e.g., the use of green LED net lights on driftnets to alert leatherbacks of the presence of the net in the water.

Questions and Answers:

Q: Roy Ho Tsoi: Are the lights still visible in our murky waters?

A: HB: Yes; however, this is still in the pilot phase, it has not been implemented.

Country Presentation: Trinidad & Tobago

Presenter: Jeff Gearhart (National Marine Fisheries Service, USA)

- Trinidad & Tobago has net fishing, shrimp trawling, long liners; no fish trawling.
- Between 2005 and 2010, data on bycatch was collected and published (Gearhart and Eckert, 2007; Gilman et al., 2010; Eckert, 2013). Several bycatch reduction methods, devices, and fishing alternatives were developed for two types of gillnet fishery commonly practiced in Trinidad by artisanal fishermen.
- The solutions lie within continuation of testing of bycatch reduction methods in gillnet fisheries, improvement of catch per unit effort for target species, reduction of the fishing effort, adjustment/ implementation of regulation for periodic closure areas, and no-fishing/ netting zones at hotspots during nesting season.

Questions and Answers:

Comment: Laurent Kelle: 'Build on the good results of the social feedback and engage the government and captains. Use social marketing: turtles are in your (fishermen's) hands! Fishermen are a proud people'.

Q: Tony Nalovic: Scientists, regulators and fishermen are not getting along?

A: Jeff Gearhart: Rural communities and NGO's work closely. A socio-economic impact study was done. A stakeholder meeting was held: more impact, more studies, and longer periods, more scientific data were requested/ needed to warrant regulatory changes. Gillnets are the most important fishery in Trinidad. Consultation and dialogue is essential. Many fishermen have no other options than fishing. Improve value of fish on the market for line fish. Reduce fishing effort. Increase collaboration among stakeholders. Identify positive opportunities; e.g., younger fishers can be more conservation-minded, more NGO's are getting involved, the current government is more receptive.

Comment: Tony Nalovic: The social dimensions of change should not be under-estimated, and they need attention!

Q: Marie-Louise Felix: Were FAD's (Fish Aggregation Devices) considered for their ability to congregate fish and increase catch rates?

A: Jeff Gearhart: We did not reach that stage. Depending on the season, water clarity changes can determine where target fish can be caught. FAD ownership is an issue; e.g., whom is allowed to fish at that spot, can others be excluded?

Comment: Rosemarie Kishore: Fisheries in Trinidad and Tobago are multi-gear, with more than 12 different gears used (e.g., gillnets, handlines, trolling, trawling, fish potting) plus industrial fishing in the form of industrial trawlers and long liners.

Country Presentation: Guyana

Presenter: Devon Reece (Fisheries Department, Guyana)

- A “No Netting Zone” adjoining Shell Beach is declared annually during the sea turtle nesting season. Villagers can fish with a net, given they keep to the guidelines; e.g., the net must be checked every 3 hours.
- Monitoring of ETP species is planned. Current there are no data on fishing effort, the seasonality or volume or bycatch, or on IUU fishing statistic. Master’s and PhD students are encouraged to address these gaps as research options.
- Establishment of a database of ETP species bycatch is in the planning stages between the PAC and the University of Guyana.
- The Protected Areas Commission (PAC) leads a monitoring program for marine turtles.
- Trawlers are required to use cameras on board, and TED use is mandatory. The “Move on Rule” – meaning that when there is a sighting, you move on – is taken seriously.
- There is no fish trawling in Guyana.
- A transition from the No Netting Zone to a No Fishing Zone, is not an option at this time.
- Onboard camera images and data are archived under the auspices of the Fisheries Department and the industrial fishermen.

Country Presentation: French Guiana

Presenters: Nicolas Paranthoën, Dr. Damien Chevallier, Michel Nalovic, Nolwenn Cozannet

- Reducing bycatch is defined as Priority #1 in the French Guiana Sea Turtle National Action Plan (Bioinsight/DIREN Guyane 2003), based on the results of monitored fisheries related injuries to turtles, the current potential for high numbers of drowned turtles annually, and the increased fishing effort due to IUU fishing.
- Declining trend in leatherback nest counts is evident at eastern and western beaches.
- Foreign IUU fishing from Brazil, Guyana and Suriname is the main concern for bycatch reduction in French Guiana.
- No Trawling Zone within 0-12 nautical miles.
- French Guiana has a relatively small fishing fleet (200 vessels) compared to Guyana and Suriname (>1,000 vessels).
- Data: in comparison to Guyana and Suriname, there are no data gaps. However, French Guiana is aiming to get more data on bycatch in gillnet fishery. Data on the different life cycle stages of leatherbacks, where and when they are present.
- French Guiana is promoting the use of the TTED in shrimp trawling in French Guiana and advocating for its use to be mandatory for shrimp imported into the European Union. Results from experiments in French Guiana, Suriname, Gulf of Mexico, and the South Atlantic Bight shows that the TTED is more efficient in bycatch reduction of *Elasmobranchs* than the TED; there is a potential loss in retention of target shrimp catch when bycatch reduction of fish is high. This difference is overcome over the length of the tow since the improved fishing conditions of the lighter trawl (TTED equipped) catches more shrimp (French Guiana, Suriname trials); trials are ongoing in Suriname.

- CRPMEM and WWF France are collaborating through these joint projects: PALICA and PALICA 2 on bycatch reduction in gillnet fishery through improved data collection, the development of Bycatch Education and Awareness programs, stakeholder engagement, information on fishing practices, training in marine turtle handling techniques, and introduction of bycatch reduction methods for trial by the gillnet fisheries (such as reducing net height, illuminating the net, changing float color and acoustic devices).

Questions and Answers:

Q: Jeff Gearhart: 'is there a need for that many float lines in the nets? The more lines, the more possibilities for entanglement of leatherbacks in those lines'.

A: Tony Nalovic: 'the fishermen are used to that many float lines, but reducing or entirely eliminating these float lines is something that we want to test'.

Country Presentation: Canada

Presenter: Brianne Kelly

- Nesting does not occur in Canada, but the country provides critical foraging habitat for NWA leatherback populations.
- Very large fishing fleets, using diverse fishing methods (gillnets, trawling, long line, traps), spread across large geographic areas and four different reporting areas.
- Highly productive foraging areas are found in Canadian jurisdiction; however, there is minimal data on foraging leatherbacks.
- Fishery-leatherback interactions and turtle bycatch mortalities are likely grossly underestimated (Hamelin et al., 2017).
- Engagement with fishers is critical and essential to improve bycatch reporting and subsequently to address bycatch through the adoption of bycatch reduction devices/methods.
- Species at Risk Act prohibits harm to leatherbacks, including bycatch.
- WWF-Canada is part of the Global Ghost Gear Initiative, also a cause of bycatch.
- There is no evidence of a decreasing trend in abundance of leatherbacks at foraging sites, based on density estimate studies from 2002-2015 (Archibald and James, 2016).

Discussions on linkages between addressing bycatch and addressing IUU.

Day 1 concluded with brief summary of country reports, and description of planned activities for

Day 2. Avanaisa Turny summarized the country reports into a draft matrix (see Annex 3) to enable comparisons across countries.

WORKSHOP PROCEEDINGS: 18 MARCH 2019

Opening Remarks

Day 2 began with a presentation, by Avanaisa Turny, of the draft Country Status Summary in Google Docs, followed by a series of working group sessions.

Working Group Session 1: Country Level

During this session, participants reviewed and adjusted each Country Status Summary. National-level groups combined information from the Country Status Summary and topics discussed on Day 1, and then discussed potential national-scale solutions and priorities for bycatch reduction.

Groups were asked to discuss the following points:

- We know where we are with leatherback bycatch in-country, where do we want to be in two years?
- What is needed to reduce bycatch significantly (by at least 30%) in two years' time, taking monitoring and evaluation into account? Make a list of actions needed to reach the goal. Discuss solutions: regulations/ gear modifications/ reduction of interaction.
- Clearly identify gaps (e.g., data, regulation, cooperation) that need to be filled in order to achieve the stated goal in two years' time.

Results of these discussions are summarized in Annex 3.

Working Group Session 2: Regional Level

During this session, participants worked in mixed groups (based on expertise and interests) organized around specific topics to discuss solutions and priorities. Participants decided on the topics, and then self-sorted into groups according to the following topics:

- Policy/ Regulation
- Gear
- Data
- Education and Awareness

Groups were directed to identify and discuss regional solutions and priorities for effective bycatch reduction at regional scales. The results for Working Group Session 2 are summarized in Annex 4 and formed the basis for the Plenary Session, which in turn resulted in the participatory formulation of the final, most important priorities for reducing bycatch affecting the NWA leatherback population.

Plenary Session

Regional priorities from the Country Status Summaries (Annex 3) and the regional priorities by topic were summarized and presented to all participants. Participants discussed and revised the proposed priorities until the final priorities could be approved by unanimous vote.

REGIONAL PRIORITIES

Strategic Framework for Bycatch Reduction in the Guianas, Trinidad & Tobago

An overarching strategic framework was crafted to guide how projects are developed in the region going forward. Individual projects at particular sites or within particular countries can use this framework to develop specific activities and work plans. The common framework should ensure that all projects developed and implemented in the future share common features and approaches, and thus can be coordinated and evaluated together in the context of the shared NWA leatherback population. The elements are as follows:

1. Focus on fisheries near nesting sites in the Guianas and Trinidad & Tobago, as well as migratory routes and foraging sites under the jurisdiction of Canada and/or the USA.
2. Focus on gillnet gear and engage fishers; convene a symposium of stakeholders (e.g., fishers, scientists, decision-makers) to co-develop conservation measures.
3. Propose/ test gear modifications in consultation with fishers and appropriate authorities;
4. Monitor/ enforce conservation measures (e.g., gear modifications) in spatial-temporal contexts determined to be of highest importance for reducing leatherback bycatch;
5. Focus on encouraging fishers to become more involved in data collection;
6. Make arrangements and develop methods for monitoring and evaluation (to measure success and failure), adaptive management, and sharing results and lessons learned.

The next step will be to build on this Strategic Framework and develop a **Regional Plan of Action (2020-2025) to address and reduce Leatherback Bycatch in the Guianas and Trinidad & Tobago** based on the priorities and key actions identified during this workshop. The Action Plan will consist of both national-scale and regional-level actions. The Action Plan will also identify key data gaps and management actions required along the migratory routes of NWA leatherbacks, as well as on their foraging grounds in the USA and Canada.

Workshop participants identified the highest priorities by topic, as follows:

Policy/ Regulation

- Protect turtles during the nesting season in waters near nesting beaches, through restricted/ closed areas at nesting sites and in nearshore areas with known or potentially high turtle-fishery interactions
- Develop a strategy to characterize and address bycatch related to IUU fishing (see Annex 5 for excerpts from WWF-Guianas, 2018, for solutions/ recommendations)

Gear

- Develop a structured program for testing, adaptation, and adoption of modified gear in gillnet fisheries in the region
- Establish and enforce time/ area restrictions for these fisheries

Data

- Develop structured bycatch data collection approaches for gillnet fisheries across the region; in collaboration with fishers; integrate relevant socio-economic aspects
- Analyze regional bycatch data in combination with turtle occurrence data, and synthesize into a regional leatherback-fishery interactions map
- Assess potential impacts of long line fisheries on leatherbacks

Education and Awareness

- Convene a multi-stakeholder (fishers, scientists, conservation groups, decision-makers) regional symposium to engage fishers in a discussion of bycatch issues/solutions

Collaborative Action

- Form an overarching organization or committee tasked with facilitating and monitoring the actions/ priorities in the region, and measuring success toward reducing leatherback bycatch
- Engage with international conventions, Commissions, and initiatives (FAO, WWF, WECAFC, CRFM, CRPMEM, ICCAT, IAC) to support, enhance and extend conservation efforts

National Focal Points

National Focal Points were selected at the Workshop as points of contact (see Annex I for details), and with the expectation that they will both follow and influence in-country developments with regards to sea turtle bycatch reduction. They will also take the lead in communication with other stakeholders, encouraging colleagues to stay focused on bycatch reduction. Finally, they will take the lead in organizing toward “next steps” as defined by Annex 4 and the proposed Regional Plan of Action.

National Focal Points

- Suriname: Hanneke van Lavieren, Mario Yspol
- Guyana: Sopheia Edgehill, Devon Reece
- French Guiana: Laurent Kelle
- Trinidad: Rosemarie Kishore, Nicholas Alexander
- Canada / USA: Brianne Kelly

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ANNEX 1: PARTICIPANT LIST



2019 REGIONAL LEATHERBACK BYCATCH PRIORITIZATION WORKSHOP

* Attended both the Regional Bycatch Workshop and the 2019 WIDECAST Annual Meeting

(*) Attended only the Regional Bycatch Workshop

NAME	POSITION	INSTITUTE	ADDRESS	PHONE	EMAIL
Canada					
* Brianne Kelly	Senior Specialist, Marine Ecosystems & Fisheries	WWF-Canada	5251 Duke Street Duke Tower Suite 1202 Halifax, NS B3J 1P3	902.482.1105 ext. 3025	bkelly@wwfcanada.org
French Guiana					
* Dr. Damien Chevallier	Researcher	Centre National de Recherche Scientifique – Institut Pluridisciplinaire Hubert Curien (CNRS-IPHC)	3 rue Michel-Ange Délégation Alsace 23 rue du Loess – BP20 Strasbourg, France	+0612 97 10 54	Damien.chevallier@iphc.cnrs.fr
* Nicolas Paranthoën	Coordinateur du Plan National d'Actions Tortues Marines en Guyane	Office National de la Chasse et de la Faune Sauvage (ONCFS)	Kourou, Guyane française	+0694 13 77 44	coordination.prtm@gmail.com
* Rachel Berzins	Cheffe de la cellule technique de Guyane	Office National de la Chasse et de la Faune Sauvage (ONCFS)	Kourou, Guyane française	+0694 40 45 14	rachel.berzins@oncfs.gouv.fr
* Christelle Guyon	Chargée de mission biodiversité marine	Direction de l'Environnement, de l'Aménagement et du Logement de Guyane	Rue Carlos Fineley CS 76003, 97306 Cayenne Guyane française	+0594 29 68 60	Christelle.guyon@developpement-durable.gouv.fr
* Nolwenn Cozannet	Chargée du projet Dauphin de Guyane	WWF France Bureau Guyane	2, rue Gustave Charley 97 300 CAYENNE Guyane française	+0594 31 38 28	ncozannet@wwf.fr
* Michel (Tony) A. Nalovic	Ingénieur halieute Fisheries Engineer Research Fisheries Biologist	Comité Régional des Pêches Maritimes et des Elevages marins en Guyane (CRPMEM)	Dock du Larivot 97351 MATOURY Guyane française	+0594 38 79 85	Mnalovic_crpmem.guyane@yahoo.com
* Rommel Todd	Gillnet fisher / Vessel owner/ Elected officer, CRPMEM	Comité Régional des Pêches Maritimes et des Elevages marins en Guyane (CRPMEM)	Dock du Larivot 97351 MATOURY Guyane française	+594 694 00 50 30	toddrommel0@gmail.com

(*) Laurent Kelle	Directeur	Bureau Guyane du WWF France	2, rue Gustave Charlery 97 300 CAYENNE Guyane française	+0594 31 38 28	lkelle@wwf.fr
Guyana					
* Sopheia Edghill	Marine Conservation Officer	WWF Guianas Guyana Office	285 Irving Street, Queentown Georgetown, Guyana	(592) 223-7801 ext. 26 Cell: (592) 610-7182	sedghill@wwf.gy
* Odacy Davis	Deputy Commissioner	Protected Areas Commission	National Park, Thomas Rd Thomas Lands Georgetown, Guyana	227-1888	odavis.pac@gmail.com
* Samuel Benn	Protected Areas Officer – Site Coordinator SBPA	Protected Areas Commission	National Park, Thomas Rd Thomas Lands Georgetown, Guyana	227-1888	sbenn.pac@gmail.com
* Hannah Andries	Ranger - SBPA	Protected Areas Commission	National Park, Thomas Rd Thomas Lands Georgetown, Guyana	227-1888	andriesh4pac@gmail.com
* Creig Henry	Ranger - SBPA	Protected Areas Commission	National Park, Thomas Rd Thomas Lands Georgetown, Guyana	227-1888	15alexraighenry@gmail.com
* Rayner Mc Andrew	Environmental Officer II	Environmental Protection Agency	Ganges Street, Sophia Georgetown, Guyana	(592) 629-8185	epa.brm@gmail.com
* Nelanie la Cruz	Research Officer	Guyana Wildlife Conservation and Management Commission	Ganges Street, Sophia Georgetown, Guyana	(592) 697-5041	nelaniefcb@gmail.com
(*) Devon Reece	Fisheries Officer	Fisheries Department	Guyana Regent & Shiv Chanderpaul Dr., Georgetown, Guyana	(592) 670-3358	devon_reece2011@yahoo.com
(*) Brentol Gibbs	Health and Safety Officer	Guyana Association of Trawler Owners and Seafood Processors	Prittupaul Singh Investments, McDoom, East Bank Demerara	(592) 225-2111	bgees32@yahoo.com
(*) Terrence Brown	Fisheries Officer	Fisheries Department, Guyana	Regent & Shiv Chanderpaul Dr., Georgetown, Guyana	(592) 225-9551 Cell: (592) 602-4191	brownerrence@yahoo.com
The Netherlands					
* Arjan de Groene	Advisor, Caribbean Netherlands Programme & Marine Turtles	WWF-Netherlands		+31 (0)30 69 37 333 Cell: +31 (0) 6 46272075	agroene@wwf.nl
Saint Lucia					
* Dr. Marie-Louise Felix	Director	4BluCs	Castries, St. Lucia	(758) 721-2019	mlfelixearth@gmail.com
Suriname					
* Hanneke Van Lavieren	Oceans Coordinator	WWF-Guianas Suriname Office	Henck Arronstraat 63 Paramaribo, Suriname	(597) 422-357 ext. 115	hvanlavieren@wwf.sr
* Efrend Barker	TED officer	Heiploeg		(597) 7168365	efrenbarker911@gmail.com
* Michael Hiwat	Marine Conservation Officer	WWF-Guianas Suriname Office	63 Henk Arronstraat, Ste E Paramaribo, Suriname	(597) 422-357 ext. 121	mhiwat@wwf.sr
* Avanaisa Turny	Director	AT-OSS	Bakamoejoeweg 24 Paramaribo-Suriname	00-597-8532629	ar.turney@outlook.com
* Tomas Willems	REBYC-II LAC Project Coord.	FAO & MAAHF-Fisheries Department	Cornelis Jongbaw straat Paramaribo-Suriname		tomaswillems@gmail.com
(*) Mario Yspol	Senior Fisheries Officer	Department of Fisheries	Cornelis Jongbaw straat Paramaribo-Suriname		marioyspola2017@gmail.com
* Els Van Lavieren	Technical Mgr Marine & Wildlife Conservation Program	Conservation International, Suriname			evanlavieren@conservation.org

* Roy Ho Tsoi	Senior Game Warden	Ministry of RGB	Cornelis Jongbaw straat Paramaribo-Suriname		rhotsoi@gmail.com
(*) M. Van der Veen	Owner/ Director	HOLSU. NV Industrial Trawl Fisheries	Domburg-Suriname		murkvdveen@gmail.com
(*) Satesh Khodai	Chair of SUNFO	Artisanal Coastal Fisheries organization Suriname		597-8547600	sunatfo@gmail.com
(*) Rashida Mahadeo	Board Member	Fishers Collective	Paramaribo-Commewijne Suriname	597 713-4022	vis-col@hotmail.com
(*) M. Van Eer	Seabob-Heiploeg	Heiploeg Suriname/ Suriname Seafood Association	Paramaribo-Suriname		info@heiploegsuriname.com
*Kim Sys	Oceans Assistant	WWF Guianas Suriname Officer			kimcsys@gmail.com
(*) Henk Bhagwandin	Lecturer/ Researcher	ADEK-UNIV-Suriname	Leysweg-Paramaribo		henk_bhagwandin@yahoo.com
Trinidad					
(*) Nicolas Alexander	President	Grande Riviere Nature Tour Guide Association	Grand Riviere, Trinidad Rep. of Trinidad & Tobago		nichocalexander@gmail.com
(*) Rosemarie Kishore	Senior Research Officer Fisheries & Aqua- culture Research Programme	Institute of Marine Affairs	Hilltop Lane, Chaguaramas Rep. of Trinidad & Tobago	(868) 634-4291 (868) 634-4292 ext 1117	rkishore@ima.gov.tt
USA					
*Dr. Karen Eckert	Executive Director	WIDECAST	6116 High Meadow Drive Godfrey, Illinois 62035	(314) 954-8571	keckert@widecast.org
* Dr. Bryan Wallace	Marine Biologist	Ecolibrium, Inc.	5343 Aztec Drive Boulder, Colorado 80303	(202) 295-7535	ecolibrium.inc@gmail.com
* Jeff Gearhart	Research Fisheries Biologist	NOAA National Marine Fisheries Service SEFSC / Mississippi Laboratories Harvesting Systems and Engineering Branch	202 Delmas Avenue Pascagoula, Mississippi 39568	(228) 549-1764 Cell: (228) 369- 0660	Jeff.Gearhart@noaa.gov

ANNEX 2: MEETING AGENDA



2019 REGIONAL LEATHERBACK BYCATCH PRIORITIZATION WORKSHOP

Paramaribo, 17- 18 March 2019

Day 1

General Objective: Identify regional and national priorities to reduce fisheries interactions and bycatch involving the Northwest Atlantic (NWA) leatherback sea turtle population, with a focus on the major nesting assemblages in the Guianas and Trinidad & Tobago.

Expected Result: A workshop report that i) summarizes current information and the conclusions of plenary and small group discussions, and ii) highlights regional priorities and next steps as identified by meeting participants.

DAY 1: *Summarize and share the current state of knowledge about NWA leatherback bycatch*

08:15 Registration

08:30 Opening and Welcome by Suriname

08:35 Welcome and Meeting Objective by WWF Guianas Steering Committee

08:40 Introduction of Participants

09:00 General Presentation on the Need and Urgency to Reduce Leatherback Bycatch

09:15 Country Presentation: Suriname

10:15 Coffee Break

10:30 Country Presentation: Trinidad & Tobago

11:30 Country Presentation: Guyana

12:30 Lunch

13:30 Country Presentation: French Guiana

14:30 Country Presentation: Canada [foraging grounds, migratory corridors]

15:30 Plenary Discussion

Focus: Similarities between countries, apparent areas of high bycatch, problem areas, possible solutions identified from presentations, gaps in knowledge, lessons learned

16:30 Closing Remarks and Adjourn

Day 2

General Objective: Establish national and regional priorities for bycatch reduction; specifically, synthesize baseline information across countries to identify priorities, issues and concerns, and gaps in knowledge or capacity that serve as obstacles to implementation of bycatch monitoring or reduction actions.

DAY 2: *Organize working groups to reach consensus on next steps at national and regional levels*

08:15 Registration

08:30 Opening and introduction: Agenda Day 2

08:35 Working Group Session 1: Country level: review and adjust country-level knowledge base, with an emphasis on bycatch reduction priorities, concerns and knowledge gaps.

09:45 Break. (Topics for Working Group Session 2 are proposed and agreed upon.)

10:00 Working Group Session 2: Thematic level: mixed groups based on expertise and interest discuss a range of topics, each to include concerns and solutions. Plenary presentation with Q&A.

11:30 Working Group Session 3: Synthesis level: mixed groups (60% country + thematic representation) meet to combine information from the country status report and the thematic discussions to focus on national solutions, identify gaps, and establish priorities in terms of effective bycatch reduction options at the national level. Plenary presentation with Q&A.

13:00 Lunch

14:00 Working Group Session 4: Regional level: mixed groups identify and discuss regional solutions, identify priorities for effective bycatch reduction at transnational scales. Plenary presentation with Q&A.

15:30 Plenary Session: Summarize national and regional priorities, and next steps.

16:45 Final announcements and end notes from WWF-Guianas and the Guyana and French Guiana representatives. End note and closing by Suriname representatives.

17:00 Workshop is adjourned

ANNEX 3: RESULTS OF WORKING GROUP SESSION 1: PLENARY MATRIX

ISSUES/ GAPS	SURINAME	TRINIDAD	GUYANA	FRENCH GUIANA	CANADA
Turtle nest data	14,937- 719 nests		377-45 nests	Avg 7800-1200 nests	
Fishing fleet	<p>Shrimp trawl</p> <ul style="list-style-type: none"> - Deep sea 4 - Penaeus 35 - Seabob 26 <p>Fish trawl 35</p> <p>Pelagic longline (tuna):</p> <ul style="list-style-type: none"> - 42 (current licenses) - 60 (allowed licenses) <p>Demersal longline 180</p> <p>Coastal fishery</p> <ul style="list-style-type: none"> - SK pin seine 15 - SK gillnet 380 - SKB bangamary 50 <p>Inland estuary fishery ~700</p>	<p>Trinidad (only)</p> <p>Fishers: 3280</p> <p>Vessels: 1640; approx. 90% artisanal (multi-gear, primary gears: gillnets, trawls, lines, fish pots)</p> <p>Landing sites: 65</p>	<p>Increasing:</p> <p>>1000 vessels (80% driftnet)</p> <p>Chinese S 305</p> <p>Gillnet Nylon (GNN) 2-4" 458</p> <p>Gillnet Polyethylene (GNP) 5-6" 329</p> <p>GNP 7-8" 49</p> <p>Catguts 39, Anchor S 42, Tie Seine 1, Pin Seine 21, Cadell 57, Circle S 14, Trawls 109, Traps 58, Liners 65</p>	<p>Stable:</p> <p>200 Gillnets vessels (70 unlicensed)</p> <p>Decreasing:</p> <p>22 trawlers licensed (8 active in 2018)</p> <p>45 artisanal hand lines licensed (from Venezuela)</p>	>1,000 vessels; fixed gear (pot, trap, gillnet), trawls, long lines, seines
IUU fishing information	<p>Mainly SK gillnet. Estimation:</p> <p>20% fishing without license.</p> <p>20% foreign vessels (Guyana)</p> <p>→ 40% IUU gillnet effort</p> <p>→ est. >530 gillnet boats</p>	<p>In 2018 an Action Plan to address IUU fishing in the ports and waters under the jurisdiction of Trinidad and Tobago was developed; awaiting Cabinet approval</p>	43.4% of fleet	2/3 of resource fished additional to reported landings (Ifremer, Levrel 2012)	Minimal
Fisheries/ fishing methods of concern	Fish trawling; Gillnets; Long lines; Ghost fishing	Gillnets (surface net and bottom-set), palangue (bottom-set long line), fish pot (lines attached to buoys)	Gillnets; Long lines; Ghost fishing	Gillnets; IUU gillnet fishing; IUU long line fishing (from Panama and others)	Pelagic trawl, fixed gear with vertical lines (pot, trap, gillnet); pelagic and ground fish long lines
Bycatch data (add gear-specific estimates, where available)	<p>Gillnet turtle bycatch: 2006, 2010, 2012, 2015-2016</p> <p>Trawl turtle bycatch: observer data 1994-2015</p>	<p>Present:</p> <p>2001-2002 (interviews), 2007-2008 (on-board observers during testing), 2011-2012 (GPS monitoring), gillnets</p>	Not present	<p>Present:</p> <p>2008-09, 2014-2015 on-board observers in coastal gillnets; 2005, 2018 port-based interviews; 1999-2005 on-board observers on trawlers; 2012-present, data on injuries</p>	<p>2004-present: logbook data from Species At Risk Act reporting;</p> <p>1978-present: entanglement data from Canadian Sea Turtle Network, Fisheries and Oceans Canada, Whale Entanglement and stranding, and other partners; some observer coverage of fisheries</p>

ISSUES/ GAPS	SURINAME	TRINIDAD	GUYANA	FRENCH GUIANA	CANADA
Gaps: fisheries – turtle spatial overlaps knowledge	Yes: Spatial distribution of both turtles and fisheries are known to a certain extent 2002-2005, data on fresh fisheries-related injuries (Hilterman & Goverse 2007)	No: mapping of turtle habitat use and fishing effort through GPS monitoring and telemetry (2011-2012)	Yes: gillnet, longline (Foreign Vessels) fisheries distribution, Consistent turtle telemetry data	Yes: IUU fishing presence mapping. The latest mapping done in 2012, according to French Navy observations	Yes: Minimal data on spatial overlaps with fisheries at a fine scale
Gaps: nesting data	No	No	Yes: Monitoring secondary beaches for full season; tagging	Globally none, but gaps exist for isolated beaches in central and western French Guiana	NA
Gaps: bycatch data	Yes: long-line fisheries; no accurate data from fish trawlers	Yes: need more recent information for gillnets. No information for other gears of concern (palangue, fish pot)	No data	Yes: IUU gillnet and longline fishing; bycatch data; local gillnet bycatch data	Yes: Likely underestimated based on Hamelin et al. (2017)
Gaps: regulation	No reporting obligation for ETP species in any fishery, except in seabob trawls	Yes. Gear/area restriction to protect bycatch	Yes: Attention only on Industrial but not the Artisanal and Semi-Industrial	Absence of “no fishing zone”	Yes: Lack of enforcement and monitoring capacity
Gaps: capacity	Yes: Institutional/ financial/ technical Revitalizing turtles caught in nets, protocols for release	Yes: Institutional/ financial/ technical Lack of enforcement and monitoring capacity. Conduct additional bycatch research. Socio-economics assessment of targeted (gillnet) fishery. Feasibility of value-added catch for ‘turtle safe’ fishing methods	Yes: Institutional/ financial/ technical	Yes: Financial/ technical (alternative fishing methods and stock assessment of new target species)	Yes: Institutional/ financial/ technical; Additional bycatch research needed
Fisheries-turtle-seasonality overlap of concern	Waters in front of Braamspunt Galibi during nesting season	Waters on the north and east coasts of Trinidad within 2.5 km, and other identified hotspots	Waters in front of Shell beach	Waters in front of nesting sites (mostly IUU fishing in western French Guiana; local gillnet fishing in eastern French Guiana)	High density fixed gear vertical lines during foraging season (e.g. lobster and crab pot gear implicated in entanglements in July and August in recent Hamelin et al. 2017 study)
Clarity in bycatch evidence in the region	YES: data	YES: data, but more recent estimates needed	YES	YES: data	NO: Bycatch reporting and associated mortality likely underreported and underestimated, respectively, based on Hamelin et al. (2017)

ISSUES/ GAPS	SURINAME	TRINIDAD	GUYANA	FRENCH GUIANA	CANADA
Leatherback in-water protection: Low/ medium/ high	Low - TED in shrimp/Seabob trawling - NFZ: very little enforcement	TED in shrimp trawling legislation for no trawling on the east coast of Trinidad Trawling on the north coast is limited in area and only from mid-Nov to mid-Jan and not under the cover of night Leatherback is an ESS (Environmentally Sensitive Species: Leatherback Turtle Notice, 2014)	TED in shrimp trawling 'NNZ'	TTED or TED in shrimp trawling is mandatory	TED in shrimp trawl gear; separator panels in silver hake and squid trawl gear; circle hooks, corrodible hooks, completion of turtle disentanglement course and on-board disentanglement gear required in pelagic long line fleet
Interactions fishing effort-turtle presence: Low/ Medium/ High	Gillnet: HIGH Trawl: LOW Pelagic long line: Unknown	HIGH	HIGH	Shrimp trawl: LOW Hand line: None Local gillnet fishing: seasonally HIGH IUU gillnet fishing: HIGH	Unknown; Better understanding of fine scale spatial and temporal overlap of fisheries and leatherbacks is needed
Leatherback turtle bycatch severity:	Gillnet: HIGH Trawl: LOW Pelagic longline: unknown	Gillnet: HIGH	No data to support	Medium for local fisheries Presumably HIGH for IUU fishing	Unknown; More complete reporting of bycatch needed to properly assess
Solutions: Regulation and enforcement	Enforcement seasonal NFZ Galibi; establishment seasonal NFZ Braamspunt; gear enforcement	Several options to mitigate bycatch in gillnets: placement, avoidance, alternative methods (e.g., trolling)	Promote the NNZ, 2018 Fisheries Regulations enacted	<u>Regulation:</u> S1: Implementation of a "temporal no fishing zone" after filling gaps on Dc breeding behavior and collaborative selectivity work with fishermen. <u>Enforcement:</u> S2: More effort against IUU fishing. Joint deployment Plan at the international level	Improved capacity for monitoring and enforcement of reporting of bycatch and the Species At Risk Act

ISSUES/ GAPS	SURINAME	TRINIDAD	GUYANA	FRENCH GUIANA	CANADA
Solutions: Gear	Fish trawlers: - TED Gillnets - reduce soak time - net adaptation - lights? - reduced net height Pelagic long lines - circular hooks - reduce soak time - lights? - other solutions? Desk study needed	O1: Replace traditional deep setting surface drift gillnets (100 – 200 “hole”) with shallow set “narrow nets” and panel construction O2: Replace gillnet fishing with modern troll line fishing, supplement with socio-economics assessment of target fishers, including feasibility of value-added catch for turtle safe fishing methods O3: Modernize outdated fishery regulations to include the provision of time-area closures of leatherback ‘hot-spots’	Use of TEDs, Use of Bycatch Reduction Devices	S3: Adapt fishing gear and practices, adopt : - Test green light and on board observation program (FEAMP PALICA2 program) S4: Modify current fishing gear. - Test reducing or entirely eliminating float lines. - Test net height reduction - Test floats color change white => red - Test floatless gillnet => on board observation program (FEAMP PALICA2 program)	Some gear adjustments already in place for trawl and long line gear; Reduction of vertical lines in foraging areas (through regulations or technical solutions)
Solutions: Temporal spacing/ MPA	NFZ Galibi and Braampunt Enforcement Temporal closed season for gillnet fisheries	Trawling does not take place on the northeast and east coasts where leatherback are located. Bycatch gear time area restrictions.		S1: Implementation of a “temporal no fishing zone” after filling gaps on Dc breeding behavior and collaborative selectivity work with fishermen	MPAs which prohibit use of gear that risks leatherback entanglement
Solutions: Other bycatch reduction options	E & A/ Training/ Advocacy Reduce gillnet fishing effort/alternative livelihoods Random check of vessels at sea by the coast guard Increase VMS coverage of artisanal fleet Training in turtle handling	Several over a period of 3 years: 2007-2010 in gillnet bycatch reduction. Economic assessment of fishery methods: trolling/ gillnetting. Fisher opinion measured on alternative options 2007. Training and demonstration 2008; 2011- spatial interaction data, Hot spot analysis	Use of onboard cameras, Onboard Observers, ETP Training, Education/ awareness, Baseline data collection	S5: proper handling guidelines and training to fishers S6: Global education and awareness	Training for fishers throughout the leatherback foraging range (in addition to training already happening in the pelagic long line fleet); supply of disentanglement equipment to fishers
Bycatch reduction priorities	-Enforcement NFZ -NFZ Braampunt -Mandatory obligation reporting of ETP species -Fish trawl TED -Estimate bycatch in pelagic long line fishery (desk study)	-Socio-economic study of targeted fishers/ fishery -Recent bycatch data; refine hotspots with VMS system -Commitment from government and fishers -Continue with gear research programs (gillnet size reduction trials, gear exchange including conservation	Goal: To determine the severity of bycatch. Indicators: 1.Legislation/regulation /policy review -regulate artisanal and semi-industrial fishery, - Review No Netting Zone - MSP for areas beyond SBPA	P1: Enforcement: More effort against IUU fishing; Joint deployment plan at international level. P2: TTED – TED European Union law and enforcement globally (to exporting countries to EU)	1. Improve data on bycatch spatially and by gear type: Provide support for citizen networks to expand data gathering and training of fishers on bycatch reporting and disentanglement

ISSUES/ GAPS	SURINAME	TRINIDAD	GUYANA	FRENCH GUIANA	CANADA
		gear subsidies, and monitoring of conservation gear) -Support collaborative regulatory reform based around time-area closures and/or gear restrictions	<p>2. Establish mechanism for data collection for all categories of fisheries (ETP) -Observer program. -Logbooks/reports -Training (all sectors involved)</p> <p>3. Establish research program for bycatch -Turtle specifics -Other ETP -Turtle telemetry (annual tracking)</p> <p>4. Capacity Building for key Institutions -new technologies -data analysis, etc.</p> <p>Monitoring and Enforcement - inter-agency response mechanism - improve enforcement of regulations</p>	<p>P3: Modify current fishing gear through on board observation program (FEAMP PALICA2 testing program)</p> <p>P4: Implementation of a “temporal no fishing zone” after filling gaps on Dc breeding behavior and collaborative selectivity work with fishers</p> <p>P5: proper handling guidelines and training for fishers (FEAMP PALICA2 program)</p> <p>P6: Global education and awareness</p>	<p>2. Reduce amount of vertical lines in water (through regulations or through technical solutions, e.g. rope-less gear)</p> <p>3. Improve capacity for enforcement and monitoring of Species at Risk Act</p> <p>4. Gather data on risk of ghost gear</p>
STRAPS/ NPA?	Yes, but outdated: Reichart and Fretey, 1993 Recihart et al., 2003	Yes – Forestry Division et al., 2010 This STRAP along with other management measures has been incorporated into the following legislation; The Environmentally Sensitive Species. (Leatherback Turtle) Notice, 2014	No, but see Recihart et al., 2003	Yes: National Action Plan 2014-2023	Yes/ No
Similarities/ clusters?		Few at this time		- IUU fisheries problem	
Outliers?		Higher densities of nesting turtles, Environmental conditions are different (limited soft-bottom substrate) on east and north coast Trinidad. Lower turbidity Target fish resources - mackerel Gillnets and Trolling fishing methods		- existing enforcement capacities - fewer gears used and less local fishing effort (# of vessels...) - EU funds availability - Mix of Guyana and Brazil style gillnets – high representation of other gillnet fleets – higher densities of fish and megafauna presence for selectivity studies (except Trinidad)	

ANNEX 4: RESULTS OF WORKING GROUP SESSION 2

Working Group Topic 1: Policy/ Regulation

Members: Arjan de Groene (Lead), Nicholas Alexander, Rashida Mahadeo, Rayner McAndrew, Efriend Barker

Priorities:

1. Enforcement of 100% ban on fishing close to nesting beaches/ foraging areas (hotspots) during the breeding/ nesting season, as a bycatch reduction measure (long-term goal), based on documented turtle movements and habitat use; with:
 - a. The enforcement of existing fishing restrictions (e.g., Galibi)
 - b. The use of existing information on turtle habitat use to inform delineation of areas
 - c. Gear restrictions
2. Enforce IUU (too broad)
3. Mandatory reporting of ETP catches to all fisheries, not just MSC-certified fisheries, as a license condition
4. Standardize ETP friendly (gillnet) gears across the region
5. Reduce total fishing licenses
6. Align with international policy frameworks; EU and US requirements for ETP-friendly fishing practices

Working Group Topic 2: Gear

Members: Jeff Gearhart (Lead), Nolwenn Cozannet, Henk Bhagwandin, Creig Henry, Todd Rommel, Tomas Willems, Michel Nalovic

I. Gillnet fishery

Gillnets have the potential to affect more leatherbacks than any other fishing gear in our region. Potential bycatch reduction and mitigation measures for gillnets include: introduce LED lighting, remove vertical lines, reduce vertical profile, reduce soak time, reduce net length (French Guiana: limit of 2500m), float color, time/ area closure or gear restriction.

Our working group qualitatively evaluated these potential measures to identify the most feasible and the most likely to reduce leatherback bycatch, building on experiments already tested in French Guiana and Trinidad. Measures that were discussed were ranked as follows, in order of *highest to lowest priority* (some measures have yet to be evaluated, these are marked with (*)):

1. Time-area /gear restriction, must include enforcement (e.g., Trinidad; Galibi, Suriname)
2. Reduce net length to 3km in Suriname and Guyana (plus winches and soak time), must include enforcement
3. Reduce the vertical profile and test *(excepted for Trinidad)
4. Remove vertical lines*
5. Reduce soak time, must include enforcement
6. Change float color*

We discussed fisheries priorities under two major categories:

1. **Gear modification** (vertical profile and remove vertical line): this is the most feasible but needs further experimentation (time, funding), especially in Guyana and Suriname, but also Trinidad and Tobago and French Guiana.
2. **Enforcement needs**: issues such as closure area/ gear restriction, net length reduction, etc. It was very clear to the group that field enforcement capacity is a prerequisite to creating more closed/ managed areas; indeed, the creation of closed areas without the means of inspecting compliance is not recommended.

We discussed the situation in Trinidad, concluding that the next step after the vertical profile experiment should be a gear exchange program / net or trolling. (*Note*: Important to understand sea turtle diving behaviors.) Gillnet fishery has the most available information, and therefore is likely to be the best opportunity to reduce bycatch. Next steps:

1. Vertical profile reduction (modification & enforcement)
 - a. Guyana, Suriname, French Guiana: testing
 - b. Trinidad and Tobago: gear exchange
2. Remove vertical lines (modification)
3. Time/ area restrictions (enforcement)
4. Net length (restrictions and enforcement) – 3 km length recommended
 - a. Trinidad & Tobago 1.5km – no winches
 - b. French Guiana 2.5km
 - c. Suriname 4km, but not enforced

II. Trawl fishery

Fish trawling, Suriname: recommendation to implement TEDs

III. Longline fishery

Guyana, Suriname: important need for onboard observer data to confirm the extent of leatherback bycatch

Trinidad & Tobago: circle hooks and handling + disentanglement gear (if leatherback bycatch is confirmed)

Any strategy must take into account several factors: measurement of failure and success, retention of target catch, high leatherback turtle bycatch reduction results, ease of management and technology transfer/ exchanges.

Working Group Topic 3: Data

Members: Nicolas Paranthoën (Lead) Devon Reece, Melanie La Cruz, Samuel Benn, Mario Yspol, Damien Chevallier, Rachel Berzins

Priority #1 Develop data collection programs on artisanal gillnet fisheries

Step 1: develop confidence/ trust with artisanal fishers (social science aspects)

Develop an interviewing program to know:

- What are the fishers' problems in general?
- What are their problems related to bycatch?

- How do they deal with these; socio-economic study of potential effects of fishing regulations, gear changes, etc.?
- What would fishers propose to do if there were no obstacles (e.g., funding)?

Step 2: implement a true data collection program

Different possibilities include:

- In collaboration with fishers, ask that they report their bycatch data
 - Make sure that they are able to identify species (e.g., ETP identification training in Guyana & Suriname using the WWF-Guianas field guide)
 - Ensure that the data collection form is strongly built to allow sufficient information (injuries, release of sea turtles...) and statistical analysis
- Make better use of technology
 - on-board cameras with GSM directly sending pictures to biologists
 - Radio + GPS + photos so fishers can directly share bycatch data
- Incentivize the fishers to send their bycatch information

In all cases, have data monitoring and sharing mechanisms in place. Conduct market and supply chain analyses – a cleaner, sustainable catch can open up potentially lucrative niche markets.

Priority #2 Estimate IUU fishing effort and bycatch data

Priority #3 Seek access to longline bycatch data from ICCAT (e.g., issues of foreign-flagged vessels operating in regional waters)

Working Group Topic 4: Education and Awareness

Members: Marie-Louise Felix (Lead) Terrence Brown, Hannah Andries, Rosemarie Kishore, Brianne Kelly, Sopheia Edgehill

Priority: Multi-Stakeholder meetings/ Symposia to get fishers informed/ engaged. Provide fishers with knowledge and tools. Build fisheries sector engagement and public awareness.

**Addressing the Marine Turtle Bycatch Threat
Education and Awareness**

TARGET GROUP	MESSAGE	MEDIUM
Children, including those of Fishers	Marine turtles are important!	Story books; Fun poems
	What are marine turtles? Why do they drown?	School talks together with field trips to the beach
	Need to protect marine turtles	
	Let's help stop turtles from being caught in fish nets	Art competitions; Drama, Carnival
Fishers & General Public	Understanding the biology of marine turtles: they are not fish, they can drown	Organized workshops with videos and posters for Fishers: resuscitation of turtles, handling/ release from fish nets

	We all play a role in protecting marine resources	One-on-one discussions; Documentaries Cell phone App to report turtle sightings Radio talk shows Posters at fish landing sites
	Understand the value of marine turtles	
	Must reduce bycatch!	
	Encourage participation in bycatch initiatives	
Government	Economic losses from sea turtle/ ETP bycatch	Roundtable discussion with stakeholders
	Contribution to SDGs, Biodiversity Convention, etc.	One-day symposium: issues & solutions with scientists, conservation groups, decision-makers and fishers
	Need to implement actions, such as spatial closures, to reduce bycatch	Presentation to decision-makers by scientists Documentary

ANNEX 5: RESULTS OF THE GUIANAS REGIONAL IUU WORKSHOP

This Annex is comprised of text excerpted from World Wildlife Fund-Guianas (2018:7-9).

Working Group Session 2

Perspective: Regional

Exercise: In your shoes! Countries will brainstorm on practical and possible solutions, making an effort to draft solutions for another country taking its own perspective, but especially the perspective of that country into account. French Guyana for Suriname, Suriname for Guyana and Guyana for French-Guyana). Present solutions per country, comment and have discussions. Results on the next page:

French Guiana for Suriname and Guyana:

- Control of fishing fleet
- Limit number of boats
- License ALL boats
- VMS on ALL boats

For Suriname:

- More control at sea
- Land ALL product in Suriname
- Report ALL departures and arrivals

For Guyana:

- Educate fishermen (programs to inform fishermen of their responsibility to respect marine resources)
- Convince captains of necessity to report to Maritime authorities all departures and arrivals
- Reduce the number of boats

Guyana for Suriname and French-Guiana:

Practical and possible solutions: tripartite Agreement for the Guiana shield

For Suriname:

- Simplify licensing
- Establish closed systems
- Education/ Awareness
- Stringent Measures

For French-Guiana:

- Utilization of Marine resources
- Adjust Punitive measures
- Increase communication amongst countries.

Suriname for Guyana and French Guiana

For Guyana:

- Fully implement license system with license conditions
- Increase Monitoring Control Systems
- Establish Anti-IUU department/ Unit

- Make an agreement with Suriname on Region 6 boats in Surinamese waters
- For French-Guiana:
- Permanent Coast Guard base on West Coast functioning as deterrent
 - Public accessibility portal for illegal vessels
 - Connect license extension with reporting of landings

Working Group Session 3

Perspective: Regional

Exercise:

- A. Brainstorm on regional issues in regional groups and develop a regional approach to IUU in the Guianas. Present the results. Discuss the outcomes of the presentations.

Results for exercise 3A:		
Results 3A		
Group 1	Group 2	Group 3
Short term	Short term	Short term
<ul style="list-style-type: none"> • Centralize information sharing system through MOU between 3 countries. Network: Website/ database 	<ul style="list-style-type: none"> • Sharing of data/ information (vessel list) → a regional IUU unit 	Joint commission: Establish mandate, timely reporting and stakeholders
<ul style="list-style-type: none"> • Tri-partisan workshops with fishermen / boat owners for education / awareness 	<ul style="list-style-type: none"> • Common regional numbering system (FAO) 	Joint Patrols: Monitoring and Control
<ul style="list-style-type: none"> • VMS on all vessels 	<ul style="list-style-type: none"> • Suriname should ratify PSM agreement 	Network: Website / Database
Long term solutions:	Long term:	
Joint patrols (IDP) with military & police	Overfishing – driver for IUU, regional stock assessment → effort control	A tripartite agreement making the above possible
<ul style="list-style-type: none"> • Education & Awareness 	Tripartite agreement	

- B. Identify criteria for regional collaboration. And develop regional approaches to IUU. Develop a work plan (on national level) to contribute to the chosen regional approaches to IUU, identify stakeholders, describe the implementation and reporting. Present the results.

Results on the next page.

Results 3B		
Suriname:	Guyana:	French-Guiana:
What: Technical IUU team/ Working group	What: Anti-IUU fishing unit	What: Joint commission on an International Level (France; FAO, EU) and or on a Technical Level: FG/ FMC
Whom: high level representatives of: <ul style="list-style-type: none"> • the Ministry of MAAHF → fisheries Department; • the Ministry of Foreign Affairs; • the Ministry of Defense → the Navy; the Ministry of Justice and Police → Maritime Police; • the ministry of Finance → Customs; • the Coast Guard; • MAS → Maritime administration. 	Whom: representatives of: the Fisheries Department, Coast Guard, the MARAD, Marine Police, MLA, MFA and Fishermen representatives.	Whom: International level: Paris/EU for negotiation (long term). Technical level: French-Guiana, Suriname, Guyana and Brazil
Tasks and responsibilities: <ul style="list-style-type: none"> • Inventory of international agreements (signed and ratified (PSM)) • Data sharing • Implementation of National IUU Action Plan 	Objective: to prevent, deter, and eliminate IUU Tasks and responsibilities: <ul style="list-style-type: none"> • Propose laws and regulations • Develop an Anti- IUU National Plan of Action • Develop and Maintain Country's Database • Education/ Awareness • Execute Plan (NPOA) Collaborate with other countries	Objective: to facilitate exchanges between the 3 countries and address assessed common problems.

Next Steps:

Suriname, Guyana and French-Guiana, will make efforts to develop a National anti-IUU Plan of Action. These efforts are initiated, lead, communicated and or advocated by the focal points. Focal points will stay in communication with WWF regarding these efforts and request support for the development of these National anti-IUU Plan of Actions, where needed.



WIDECAST

Wider Caribbean Sea Turtle Conservation Network

“Working together to build a future where all inhabitants of the Wider Caribbean Region, human and sea turtle alike, can live together in balance.”

The Wider Caribbean Sea Turtle Conservation Network (WIDECAST) is a regional coalition of experts and a Partner Organization to the U.N. Environment Programme’s Caribbean Environment Programme. WIDECAST was founded in 1981 in response to a recommendation by the IUCN/CCA *Meeting of Non-Governmental Caribbean Organizations on Living Resources Conservation for Sustainable Development in the Wider Caribbean* (Santo Domingo, 26-29 August 1981) that a “Wider Caribbean Sea Turtle Recovery Action Plan should be prepared ... consistent with the Action Plan for the Caribbean Environment Programme.”

WIDECAST’s vision for achieving sea turtle recovery on a regional scale has focused on bringing the best available science to bear on sea turtle management and conservation, empowering people to make effective use of that science in the policy-making process, and providing a mechanism and a framework for cooperation within and among nations. By involving stakeholders at all levels and encouraging policy-oriented research, WIDECAST puts science to practical use in conserving biodiversity and advocates for grassroots involvement in decision-making and project leadership.

Emphasizing initiatives that strengthen capacity within participating countries and institutions, the network develops and replicates pilot projects, provides technical assistance, enables coordination in the collection, sharing and use of information and data, and promotes strong linkages between science, policy, and public participation in the design and implementation of conservation actions. Working closely with local communities and resource managers, the network has also developed standard management guidelines and criteria that emphasize best practices and sustainability, ensuring that current utilization practices, whether consumptive or non-consumptive, do not undermine sea turtle survival over the long term.

With Country Coordinators in more than 40 Caribbean nations and territories, WIDECAST is uniquely able to facilitate complementary conservation action across range States, including strengthening legislation, encouraging community involvement, and raising public awareness of the endangered status of the region’s six species of migratory sea turtles. As a result, most Caribbean nations have adopted a national sea turtle management plan, poaching and illegal product sales have been dramatically reduced or eliminated at key sites, major nesting beaches are protected, many of our largest breeding colonies are monitored on an annual basis, alternative livelihood models are increasingly available for rural areas, and citizens are mobilized in support of conservation action. You can join us! Visit www.widecast.org for more information.

WWW.WIDECAST.ORG