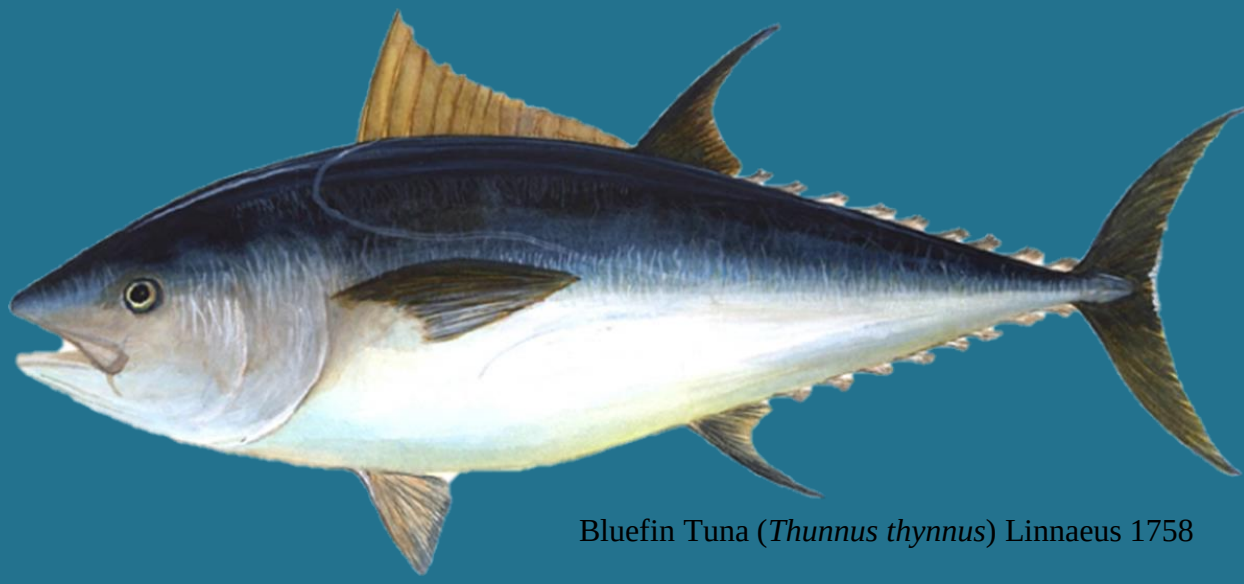
SHORT-TERM CONTRACT (ICCAT GBYP 16/2019-B) TAGGING PROGRAMME 2019 THE ATLANTIC-WIDE RESEARCH PROGRAMME FOR BLUEFIN TUNA (PHASE 9)

Draft final report on tagging activities in the Celtic Seas Area 2019



Bluefin Tuna (*Thunnus thynnus*) Linnaeus 1758

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Marine Institute
Foras na Mara

This project is co-funded by the European Union

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1. Executive Summary of Bluefin Tuna Satellite Tagging in Ireland, 2019

In 2019, the Marine Institute responded to a call for a short term contract for the tagging programme 2019 (Area B) of the Atlantic Wide Research programme for Bluefin Tuna ((ICCAT GBYP 16/2019-B, Phase 9) and were successful in this bid and received 15 satellite tags and associated funding for tagging activities and production of reports and information.

Satellite tagging of Atlantic bluefin tuna was carried out in October/ November 2019 with 12 individuals tagged and released with Wildlife Computers, pop-off satellite archival tags (Table 1) and numbered spaghetti tags. All tagging was carried out under a project licence from the Irish Health Products Regulating Authority (HPRA) with licenced and trained personnel. A Research Mortality Allowance (RMA) (Appendix I) was obtained from ICCAT who also supplied ICCAT coded floy tags for identification of fish if recaptured at a later stage. The Irish Sea Fisheries Protection Agency (SFPA) were made aware of the programme and identities of the vessels, skippers and scientific personnel and a derogation was obtained for scientific research fishing for a specified area and period (Appendix II). An Invitation to Tender for the Supply of a Commercial Vessel to tag Bluefin Tuna off the Coast of Ireland for the Marine Institute was issued in August 2019 (Appendix III). Appendix IV contains ICCAT's Electronic Tagging Record Table (TG03-EleTReRc_Ireland_BFT_2019) containing all the tagging information for the 2019 tagging campaign.

2. Introduction

Electronic tagging using archival tags reported by Block et al. (2005) highlighted the potential importance of the coast of Ireland and the UK as migratory routes for Atlantic bluefin tuna. A 191 cm fish tagged in waters off North Carolina showed trans-Atlantic migrations to the Mediterranean Sea and multi-annual site fidelity to waters off Ireland and the UK. This single track suggested that after a juvenile foraging period in the west, Atlantic bluefin foraged in the waters of the east Atlantic off Ireland and then undertook migrations to the Balearics and other known Mediterranean spawning areas. The only dedicated electronic tagging activity off Ireland was conducted in 2003 and 2004 by a Bord Iascaigh Mhara - Irish Sea Fisheries Board in collaboration with Stanford University (USA) (Cosgrave et al, 2008; Stokesbury et al. 2007). Tagging of fish in Irish waters demonstrated that Atlantic Bluefin released in Irish waters travel between European foraging grounds, known eastern breeding regions (Mediterranean Sea; Malta) and western Atlantic waters. These data also highlighted a tentative link between bluefin caught off Ireland and western management regions. In addition, recent electronic tagging of ABFT off Scotland has shown local movements of Atlantic bluefin tuna

around Scottish waters (Neat et al. 2014), to the north of Ireland, and further south. Given these insights it is important that stock origin, habitat utilisation and large-scale movement patterns of these Atlantic bluefin are characterised in more detail to ensure that the population models and concepts used in Atlantic bluefin tuna stock assessment and Management Strategy Evaluation (MSE) are parameterised as accurately as possible.

Investigation of the distribution and movements of Atlantic bluefin tuna in Irish waters is now a research priority for Ireland. The ocean waters off south Donegal are currently regarded by the International Commission for the Conservation of Atlantic Tuna (ICCAT) as an important area for Atlantic bluefin tuna and indications are that significant numbers arrive in the area over the period August to November each year. The Marine Institute carried out a bluefin tagging programme in autumn 2016 to support the International Commission for the Conservation of Atlantic Tuna (ICCAT) Grand Bluefin Year Programme (GBYP) Atlantic research programme for Bluefin tuna and continue to tag annually.

ICCAT is an inter-governmental fishery organization responsible for the conservation of tunas and tuna-like species in the Atlantic Ocean and its adjacent seas. ICCAT compiles fishery statistics from its members and from all entities fishing for these species in the Atlantic Ocean, coordinates research, including stock assessment, on behalf of its members, develops scientific-based management advice, provides a mechanism for Contracting Parties to agree on management measures, and produces relevant publications. The Atlantic-wide research programme for Bluefin tuna was officially adopted by the ICCAT Commission in 2008 with a key priority being to improve understanding of key biological and ecological processes through electronic tagging experiments to determine habitat and migration routes. GBYP was adopted as official acronym of the research, which was initiated at the end of March 2010. ICCAT manage Atlantic bluefin stocks under a two stock hypothesis for management and assessment i.e.

•Eastern Atlantic Ocean and Mediterranean Sea stock, that spawns in the Mediterranean Sea
•Western Atlantic Ocean stock, that spawns in the Gulf of Mexico, with a boundary line dividing the stocks at 45 W longitude.

Results of Block et al. (2005) as well as tagging research by others including ICCAT and their collaborators indicates that movement across the currently assumed east-west boundary in the Atlantic, does occur. Scientists have used the spatial data to improve management models (Taylor et

al. 2011, Kerr et al. 2016). ICCAT now recognises the need to develop quantitative knowledge of mixing rates and integrate this knowledge into the current assessments, as well as new models to improve the multiple stock evaluation processes.

The Mediterranean and Eastern Atlantic bluefin tuna (considered a single stock) is a highly regulated species with annual catch limits set by the International Commission for the Conservation of Atlantic Tunas (ICCAT) based on scientific advice.

The EC became a Contracting Party to ICCAT (the International Commission for the Conservation of Atlantic Tunas) in 1997. EU TACs and quotas for Bluefin Tuna were set by Council for the first time at the December, 1997 meeting in order to implement ICCAT catch limits/TACs for these species. Ireland did not have a track record of targeting bluefin tuna and does not have a quota. Ireland has access to a by-catch "others" quota for MSs without a quota share to cover by-catches of BFT in commercial fisheries subject to certain conditions. Ireland has no quota to cover recreational fishing for BFT and has had no such quota since 1997. This tagging programme has been developed to improve understanding of the stock and migratory patterns.

In 2016, the Marine Institute collaborated with Stanford University (USA), University of Acadia (Nova Scotia, Canada) to successfully tag and release 16 Atlantic bluefin tuna off the coast of Donegal with satellite tags to identify spawning stocks and the level of mixing of stocks in Irish waters. Training in application of satellite tags to bluefin tuna was provided to staff of the Marine Institute by these international tagging experts as direct experience in handling and tagging these extremely large fish is essential for future Irish tuna research work. A consortium continued to tag Bluefin tuna off the Donegal coast over the period September to October 2017 and was expanded to include Queens University, Belfast and Trinity College, Dublin to investigate early behaviour and swim responses of bluefin tuna post capture and tagging. In total 9 fish were tagged with satellite tags and 3 fish tagged with accelerometer tags.

In 2018, the Marine institute continued bluefin tuna tagging off the coast of Donegal over the period of October and November whilst continuing the partnership with Trinity College Dublin to investigate post tagging behaviour of bluefin tuna. In total 24 tuna were tagged with satellite tags and a further four with accelerometers.

In 2019, the Marine Institute responded to a call for a short term contract or the tagging programme 2019 (Area B) of the Atlantic Wide Research programme for Bluefin Tuna (ICCAT GBYP 16/2019-B Phase 9) and were successful in this bid. This report, taking into account the relevant scientific literature, contains:

a. Full description of the work carried out for the tagging activities, with the total number of tagged tunas in each area and specification of any double tagged tuna;

b. Detailed description of the methodology and protocols;

c. Maps of the areas in which the tagging was carried out;

d. Detailed tables with the definitive number of tagged specimens by area, size composition and type of tag (miniPATs + conventional spaghetti tag);

e. Copy of the data input worksheets from the ICCAT tagging database;

f. Possible recommendations for adjusting the tagging strategy for tagging in future Phases of ICCAT GBYP;

g. An Executive Summary.

2.1 Legislative/formal preparation:

Tagging was carried out under an Animal Welfare Licence (Project AE19121/P003 as required under Directive 2010/63 /EU and S.I. No. 543 of 2012).

ICCAT included the Marine Institute in the International Research Mortality Allocation (RMA) in 2019 (Appendix I).

Derogation of fishing for Bluefin Tuna fishing for the purposes of research was reviewed and granted for 2019 from the Irish Sea Fisheries Protection Authority (Appendix II).

2.2 Financial preparation:

ICCAT provided funds under contract to tag 15 BFT between September and October 2019 and to provide reports on tagging, tagging data and information to cover vessel charter, technical and travel support of Marine Institute staff and Stanford University.

An Official call and open tender (ETender) process for Vessel Charter and formal evaluation of tenders was implemented (Appendix III). Vessel charter was by open advertised competition and was awarded

to skippers of the Leah C, vessels which had previously been used for tagging bluefin tuna from 2016 and the Deep Blue which had not been previously used (Appendix III).

3. Tagging Locations and Methods

Pop-up Satellite Archival Transmitting Tags (PSATs) are designed to track the large scale movements and behaviour of pelagic fish and other animals. Depth, temperature and light-level data are used to estimate location. At a user-specified date and time, a pin is corroded, releasing the PSAT to float to the surface and transmit summarised information via the Argos satellite system. Daily longitude of the migration track, is calculated onboard the PSAT using geo-location by light level techniques. Daily latitude can be calculated from transmitted light level curves using software provided by the tag manufacturer. The results provide the migration path and depth and temperature preferences of the study animal, as well as oceanographic data, in the form of depth-temperature profiles.

Accelerometer tags were also applied in association with the satellite tags to two BFT in order to measure acceleration in three spatial axes and when attached to an animal, provide very high resolution measurements of relative activity levels and behaviour of the tagged animal. For fishes, accelerometers can provide powerful measurements of swimming effort including tail-beat frequency and amplitude, and can identify burst events associated with predation attempts. Since they index gravity, accelerometers can also reveal orientation of the animal in space (e.g. pitch and roll angles); important information for identifying abnormal swimming behaviour. The accelerometer devices are typically coupled with additional sensors including swim speed, water depth, and water temperature.

All fish were tagged off the Donegal coast within sight of shore (Figure 1). Of the fifteen PSAT tags provided by ICCAT, 12 were deployed. Two vessels were used during the tagging period i.e. the Leah C and Deep Blue. These vessels are equipped with transom doors to bring fish on board with specialized gear, fighting chairs to land the fish.

All 12 fish were captured using angling methods and squid spreader bar lure setups with up to 11 separate plastic squid lures per rig. Only the last in the train bears a hook. Once the lure is taken the fish are played to the boat as quickly as possible and landed through the transom door via a ramp using a lip hook technique developed by the Block lab (Block et al. 2001). On board, the team performed individual tasks e.g. placing of wet cloth over the eyes of the fish to keep the fish calm, constant irrigation of the gills with a hose pumping fresh saltwater, insertion of the PSAT into the

dorsal musculature using a titanium tag dart with retention loop. Two other numbered marker tags (spaghetti tags) were also applied to aid in recovering information form tagged fish. Small samples of tissue were removed for genetic analyses. As quickly as possible the fish were then released back into the water. The onboard procedure takes approximately 3 to 5 minutes. A length and girth were recorded as well as comments on the fish appearance in general, the landing, tagging and release condition of the fish upon release. The position of hook-up and release is noted and recorded. Details of tagging for satellite tags are given in Table 1. All fish caught were larger than 203cm with the largest being 230cm.

Bad weather conditions during the period available for electronic tagging caused some planned tagging trips to be cancelled and hindered the efforts of the taggers considerably compared to the previous years when tagging was carried out at this time (2016, 2017 and 2018). Although a total of 19 trips were undertaken (19 boat days) , vessels had to return to port early in some circumstances due to the adverse weather conditions, additionally these weather conditions made spotting of busting tuna more difficult due to increased sea state. Nonetheless, no significant problems were encountered during tagging operations and no modifications were made to the tagging protocols as outlined in the HPRA project licence. All 12 fish were released alive with satellite tags and conventional tags attached (Table 1). ICCAT data sheets containing tagging details are included in Appendix IV.

4. Results and possible recommendations for adjusting the tagging strategy in future Phases of ICCAT GBYP

Since tagging, two tags have prematurely popped off: these were ICCAT tags 18P0260 (35234) on the 30/11/2019 (31 days after tagging) and 18P0293 (168210) on the 09/11/2019 (6 days after tagging). No other tags have detached. The transmission time for these two tags was markedly reduced compared to previous tags.

Long term retention of satellite tags is essential to obtain the best value for money as well as the most complete information on the migration and behaviour of bluefin tuna. It is essential to have operators who have tagged bluefin tuna with satellite tags on board at all times. Training of new taggers operators should be under strict control and be supervised by experts with at least two years of tagging bluefin tuna experience. Only limited numbers of tags should be placed by newly trained taggers.

Fish for satellite tagging should be brought to the boat as quickly as possible to avoid exhausting the fish. Handlining or retrieving the fish with the rod in the rod holder can assist with bringing the fish in quickly (Figure 3). Tagging of the fish while still in the water alongside the boat would be advantageous in terms of eliminating much of the stress associated with tagging on board, provided the tag could be deployed quickly and easily. However, it is not possible to do this in all sea conditions and therefore, the presence of a transom door and ramp on the vessel is essential in order to avoid lifting the fish excessively onto the boat. Sufficient space is needed to be able to turn the fish and release it head first after tagging. Liphooking and bringing the fish onboard is also an operation which needs to be taught by experienced operators.

Types of anchor and tethering materials are crucial. Titanium anchors should not be too sharp or flexible to avoid them pulling out of the muscle too quickly. The use of a retention loop and a second anchor is highly recommended.

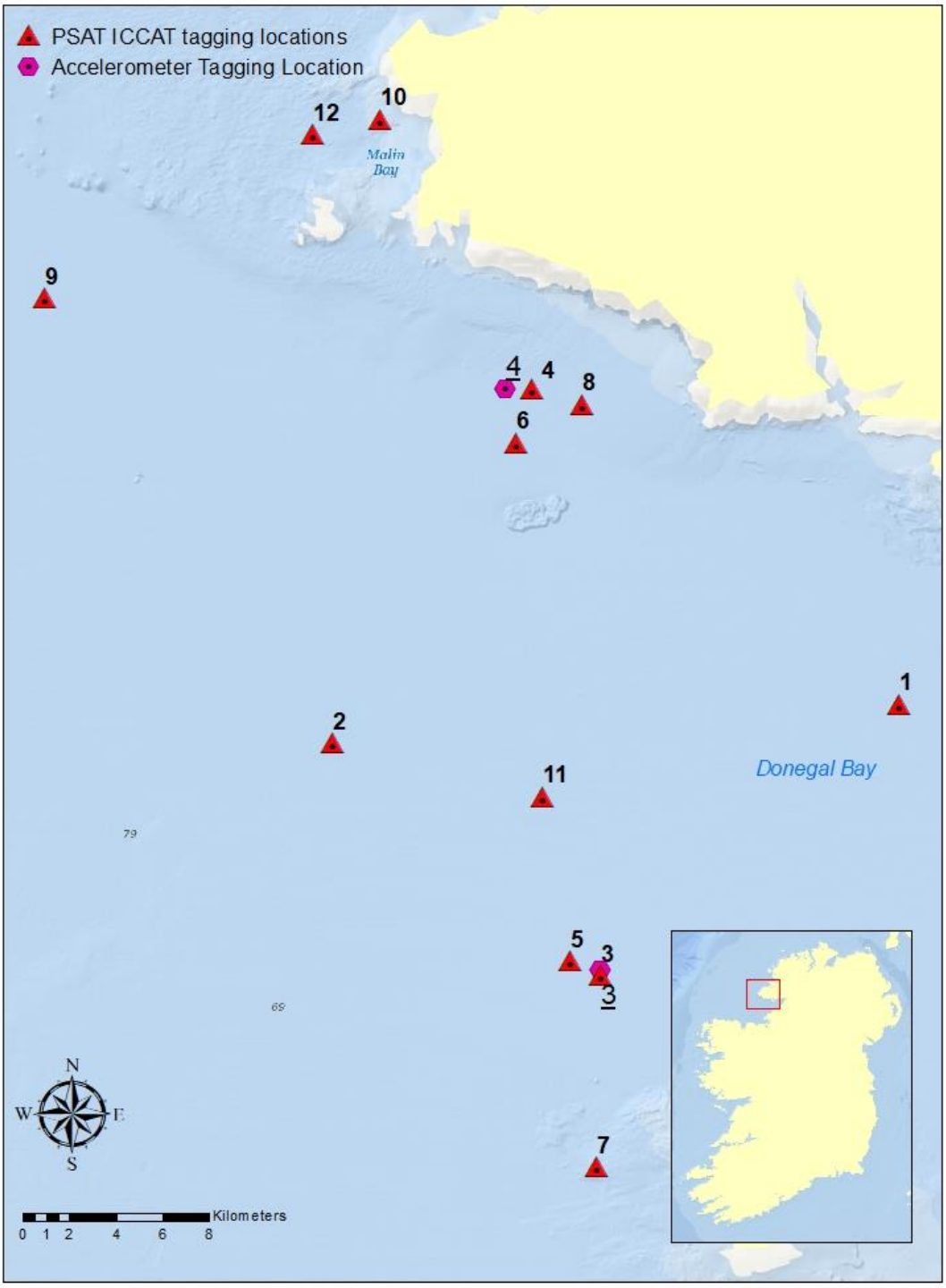

Figure 1. General area of bluefin tagging in 2019 – Tags provided by ICCAT. Accelerometers provided by Trinity College Dublin

Table 1. Tagging details for Bluefin Tuna tagging in Ireland 2019. (data provided electronically to ICCAT)

PSAT Tag Code	PTT No	1st Floy Tag	2nd Floy Tag	Accelerome	Tagging Date	Tagging Time (24h	Released	Reason	Loop &Tag Anchc	Latittude	Longitude	Length cm	Half Girth (cm)	Est. Wt kg
18P0292	168209	BYP030904	BYP77539	n/a	18/10/2019	14:20	n/a	n/a	Block Lab	54 32.84	8 35.84	204	78	160
18P0302	168213	BYP030907	n/a	n/a	30/10/2019	13:09	n/a	n/a	Block Lab	54 29.232	8 43.391	221	87	200
18P1500	180995	n/a	BYP79115	yes	31/10/2019	10:00	n/a	n/a	Block Lab	54 29.44	8 43.19	215	80	170
18P0268	162991	BYP030901	n/a	yes	31/10/2019	12:12	n/a	n/a	Block Lab	54.29.976	8 44.054	222	77	160
18P0260	35234	BYP03015	BYP79113	n/a	31/10/2019	12:15	30/11/2019	Premature. Pin intac	Block Lab	54 29.56	8 44.1	219	78	160
18P0892	180991	BYP030909	BYP77542	n/a	02/11/2019	09:13	n/a	n/a	Block Lab	54 29.655	8 41.004	228	74	155
18P0308	n/a	BYP030908	BYP77547	n/a	02/11/2019	11:02	n/a	n/a	Block Lab	54 27.009	8 43.24	221	71	140
18P1065	180993	BYP030911	BYP77536	n/a	02/11/2019	11:52	n/a	n/a	Block Lab	54 29.614	8 42.105	213	71	130
18P0270	163006	BYP030903	BYP77545	n/a	02/11/2019	12:35	n/a	n/a	Block Lab	54 29.592	8 41.911	203	66	110
18P0300	168212	BYP030906	BYP79114	n/a	02/11/2019	13:55	n/a	n/a	Block Lab	54 28.796	8 40.362	230	77	170
18P0293	168210	BYP030459	BYP79112	n/a	03/11/2019	13:08	09/11/2019	Premature. Pin intac	Block Lab	54 30.021	8 42.159	203	69	120
18P1027	180992	BYP030910	BYP79117	n/a	06/11/2019	13:16	n/a	n/a	Block Lab	54 29.724	8 43.167	208	69	125

Figure 2. Squid spreader bar being fished with up to four sets operating close to the surface (orange circles) – note proximity to land during some fishing operations in 2017.

Figure 3. Bluefin tuna being played into the boat quickly using the rod rest to avoid stress; tagging procedure on board. Note constant irrigation of gills with fresh seawater during tagging and subsequent sampling of tissues for genetic stock identification. (Figure not to be reproduced without permission)

5. References

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Cosgrove et al. (2008) Bluefin Tuna Tagging in Irish Waters. Fisheries Resource Series, Bord Iascaigh Mhara (Irish Sea Fisheries Board), Dun Laoghaire, Ireland. Vol. 6, 2008, 16pp. ISSN 1649-5357 ISBN 1-903412-29-3.

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6. Acknowledgements

Particular thanks go to Adrian Molloy and Michael Callaghan who skippered the vessels and to a number of anglers who caught fish for the project. Thanks also to Nick Payne & Haley Dolton from Trinity College for their participation in tagging alongside their accelerometer deployments/retrievals. Many thanks to Katie Thomas & Elizabeth Tray for assistance with tagging.

This work was carried out under the provision of the ICCAT Atlantic Wide Research Programme for Bluefin Tuna (GBYP), funded by the European Union, by several ICCAT CPCs, the ICCAT Secretariat and by other entities (see: https://www.iccat.int/GBYP/en/Overview.asp). The contents of this paper do not necessarily reflect the point of view of ICCAT or of the other funders, which which they are not responsible neither do they necessarily reflect the views of the funders and in no way anticipate the Commission's future policy in this area.

Appendix I - Research Mortality Allowance (RMA)

INTERNATIONAL COMMISSION FOR THE CONSERVATION OF ATLANTIC TUNAS
COMMISSION INTERNATIONALE POUR LA CONSERVATION DES THONIDES DE L'ATLANTIQUE
ICCAT CICTA CICAA
COMISIÓN INTERNACIONAL PARA LA CONSERVACIÓN DEL ATÚN ATLÁNTICO

Annex 2

LIST OF PARTICIPANTS IN ICCAT GBYP TAGGING ACTIVITIES AND BIOLOGICAL STUDIES IN 2019

Third list

1. Alleanza Pescatori Ricreativi (APR), Genova - EU-Italy (conventional tagging)
2. AquaBioTech Ltd. - EU-Malta (biological sampling)
3. Arrain-Denok Club, EU-Spain (conventional tagging)
4. Asociación Catalana per una Pesca Responsable (ACPR), Barcelona - EU-Spain (conventional tagging)
5. Asociación Mallorquina para una pesca responsable (AMPR) – EU-Spain (Conventional and electronic tagging)
6. AZTI Fundazioa - Fundación AZTI — EU-Spain (biological sampling, conventional tagging)
7. Balfegó & Balfegó S.L., EU-Spain (biological sampling)
8. Centre for Environment, Fisheries and Aquaculture Science (Cefas) – EU-United Kingdom (tagging)
9. Centro de Estudios Avanzados de Blanes (CEAB-CSIC) – EU-Spain (tagging)
10. FIPSAS-CIPS, Roma - EU-Italy (conventional tagging)
11. Department of Aquatic Resources, Institute of Marine Research, Swedish University of Agricultural Sciences (SLU) - EU-Sweden (tagging)
12. IFREMER - EU-France (FishNchip project; tagging)
13. INRH – Morocco (biological sampling)
14. Institut za oceanografiju i ribarstvo (IZOR) – EU-Croatia (biological sampling)
15. Institute of Marine Research – Norway (tagging, sampling)
16. Instituto Español de Oceanografía (IEO) - EU-Spain (biological sampling, conventional tagging)
17. Instituto Mediterráneo de Estudios Avanzados (CSIC) – EU-Spain (Conventional and electronic tagging)
18. Instituto Portugués do Mar e da Atmosfera (IPMA) - EU-Portugal (biological sampling, tagging)
19. Large Pelagics Group, St. Andrews Biological Station (SABS) – Canada (tagging)
20. Marine Institute — EU-Ireland (tagging)
21. National institute for Aquatic resources, Technical University of Denmark (DTU Aqua) - EU Denmark (tagging)
22. National Institute of Fisheries Sciences – Republic of Korea (tagging)
23. Pelagos Net Farma d.o.o., EU-Croatia (biological sampling)
24. TAXON Estudios Ambientales S.L. - EU-Spain (biological sampling)
25. Tunipex, S.A. Empresa de Pesca de Tunídeos - EU-Portugal (biological sampling, tagging)
26. Universidad de Cádiz, Departamento de Biología - EU-Spain (biological sampling)
27. Università di Genova (UNIGE) – EU-Italy (tagging)
28. University of Exeter - EU-United Kingdom (tagging)
29. WWF Mediterranean Marine Initiative – EU-Italy (tagging)

Corazón de María, 8 – 28002 MADRID – Spain, Espagne, España – Tel: +34 91 416 5600 – Fax+34 91 415 2612 – www.iccat.int- info@iccat.int

Appendix II Derogation to conduct scientific research fishing 2019

AN t-ÚDARÁS UM CHOSAINT IASCAIGH MHARA | SEA-FISHERIES PROTECTION AUTHORITY

Headquarters, Park Road,
Clogheen, Clonakilty,
Co. Cork, Ireland

T +353 (0) 23 8859309
F +353 (0) 23 8858796
W www.sfpa.ie

14TH October 2019

DSR 10/2019

Dr Niall Ó'Maoileidigh
Marine Institute
Ireland

DEROGATION TO CONDUCT FISHING FOR SCIENTIFIC RESEARCH

"LEAH C" & "DEEP BLUE"

Dear Dr Ó'Maoileidigh

Please note that the Sea-Fisheries Protection Authority is pleased to agree to your request for a specific derogation to conduct fishing for scientific research subject to compliance with the terms outlined below:

Type of survey: A research consortium has been formed comprising the Marine Institute, Stanford University (USA) and Trinity (Dublin). The consortium will aim to tag between 10 and 20 Atlantic bluefin tuna (ABFT) with electronic satellite archive tags (PSATS) and conventional tags in the coastal waters of the North West of Ireland between October and mid- November 2019. The tags are supplied by the International Commission for the Conservation of Atlantic Tunas ICCAT and the Marine Institute. The consortium will also undertake biological sampling of fin and muscle tissue.

Vessel Details: Name: **LEAH C & DEEP BLUE (angling charter vessels)**

Area coverage: ICES VIa & VIIb; Donegal Bay.

Period: Between 09TH October & 30th November 2019, approx. 20 days in total during this period.

Target Species: Bluefin Tuna (Thunnus thynnus)

Scientific Staff: Dr Niall Ó'Maoileidigh & Marine Institute staff along with colleagues from Stanford and Trinity College(at least two on board at all times during trial)

Please be advised that a copy of this document should be retained onboard the vessel whilst engaged in the scientific work.

Finally I would like to wish you and your team every success with the project.

Christopher Nalty
Sea-Fisheries Operations Manager
cc: [Naval Service, SFPA-SMT, SFPA-Senior Port Officers, European Commission]

Invitation to Tender for the Supply of a Commercial Vessel to tag Bluefin Tuna off the Coast of Ireland for the Marine Institute, Rinville, Oranmore, Co. Galway.

Ref: ITT19-042

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Annex 1 - Marine Institute Etenders Postbox Policy

Annex 2 – Form of Tender

Annex 3 – Charter Agreement

1. Introduction

The Marine Institute, a semi State body, wishes to invite tenders for the supply of a commercial fishing/angling vessel to conduct satellite tagging of Bluefin tuna in the general area of the South West to North West Coast of Ireland. The successful applicant(s) will be selected based on technical suitability, experience in the area, holding of current and previous experience in scientific research and surveys, as well as cost.
The Marine Institute also requires that the tenderer hires one suitably qualified angler who will secure the specimens for tagging. It shall be the responsibility of the successful applicants to pay the angler at their appropriate daily rate.
The value of the contract to be awarded pursuant to this tender process is below the threshold above which advertising of services contracts in the Official Journal of the European Union is obligatory. Therefore, this competition is not subject to the European Communities (Award of Public Authorities' Contracts) Regulations 2006.
The Marine Institute is the national agency responsible for Marine Research, Technology Development and Innovation (RTDI). The Marine Institute seeks to assess and realise the economic potential of Ireland's 220 million acre marine resource; promote the sustainable development of marine industry through strategic funding programmes and essential scientific services; and safeguard our marine environment through research and environmental monitoring.
The Institute was set up under the 1991 Marine Institute Act with the following general functions:
"to undertake, to co-ordinate, to promote and to assist in marine research and development and to provide such services related to marine research and development, that in the opinion of the Institute will promote economic development and create employment and protect the environment. " - Marine Institute Act, 1991.

Fisheries Ecosystem Advisory Services (FEAS) of the Marine Institute, has its mission to "to research, assess and advise" on the sustainable exploitation of marine fisheries resources and to promote the sustainable development of the marine living resources.

Invitation to tender

Presently, a requirement exists for two separate charters of a fishing/angling vessel for a period of up to 10 days each to scout areas where Bluefin tuna may be present and to capture a limited number of specimens for tagging. Each charter represents one Lot and can be bid for independently or together.

The project is funded by the Marine Institute. The payment will relate solely to days spent at sea.

Lot 1
Vessels are invited to tender on the basis of their ability to undertake the survey schedule (10 days from the beginning of September 2019). The survey will operate on a daily basis leaving port early in the morning and returning late at night. This will be agreed with the skipper each day with the scientist in charge and will be weather dependent. The general area to be sampled will be the South West to North West Coast of Ireland.

The survey will ideally take place over a 10 day period in the month September depending on conditions.

Detailed information of the track and survey plan will be provided by the Marine Institute. The successful applicants will be selected based on technical suitability, cost of charter, and previous experience in scientific research and tagging surveys.

Lot 2
Vessels are invited to tender on the basis of their ability to undertake the survey schedule (10 days from the beginning of October 2019). The survey will operate on a daily basis leaving port early in the morning and returning late at night. This will be agreed with the skipper each day with the scientist in charge and will be weather dependent. The general area to be sampled will be the South West to North West Coast of Ireland.

The survey will ideally take place over a 10 day period in the month of October depending on conditions.

Detailed information of the track and survey plan will be provided by the Marine Institute. The successful applicants will be selected based on technical suitability, cost of charter, and previous experience in scientific research and tagging surveys.

The Marine Institute reserves the right not to proceed with the tagging programme and in such circumstances the tender process will be terminated and no contract will be issued.

2. Scope of Tender

This is an Open Invitation to Tender for commercial fishing/angling vessels as service suppliers.

Note: No guarantee is made by the Marine Institute that the tender shall be awarded.

Tender respondents shall be evaluated for **each Lot in two phases**. Tenders must pass **each criterion** in Phase 1 to proceed to Phase 2. This is a pass/fail phase and no points will be awarded. If all criteria in Phase 1 are not met, tenders will be eliminated.

Lot 1 & 2 Phase 1

Please note tenderers for Lot 1 & 2 may only proceed to the Phase 2 if they pass all of the criteria below. Each of the criteria below are viewed as essential and if one or more of the criteria below is not met then tenders will be automatically eliminated. This is a pass/fail phase and no scoring will be attached to the results.

Criteria No.	**Please note tenderers may only proceed to the Phase 2 if they pass all of the criteria below.**	**Pass/Fail**
1	Confirmation that tenderers has or will be in a position to obtain Public Liability insurance of not less than €2.6 million and Employers Liability of €13 million (if applicable).	
2	Valid **Safety Certificate** for vessels	
3	Confirmation that the required **Safety Equipment** is on board, serviced and functioning properly – a statement from the vessel owner is required with submission	
4	The proposed Vessels must meet the minimum **Vessel Technical Specification.** Vessels must:	
	a. be at least 8 meters in length.	
	b. have a range of at least 20 miles offshore	
	c. space for at least two experienced anglers	
	d. space for up to 5 person scientific tagging team	
	e. be experienced in offshore angling operations	
	f. be able to stay at sea for at least 12 hours	
	g. have previous experience with catching Bluefin tuna	
5	Availability for Lot 1 – confirm availability to undertake charter in September 2019	
6	Availability for Lot 2 – confirm availability to undertake charter in October 2019	

Please note that when submitting a response to each of the criteria above it is sufficient for tenderers to declare that they have the relevant capacity for Criteria 1, 2 & 4. The Marine Institute will seek verification and evidence of such capacity only in the event of a tenderer being considered for the award of the contract. The declaration should clearly and unambiguously indicate the tenderers ability to meet each of the Marine Institute's requirements above.

Lot 1 & 2 Phase 2

Tender respondents shall be evaluated on the following criteria:

Criteria		**Max points**
Previous experience in undertaking collaborative research and scientific work. Applicants should describe in detail previous work undertaken.	Fish tagging work	**20**
	Experience in undertaking marine research surveys	**10**
	Carriage of fisheries scientists/observers	**5**
	Provision of biological samples	**5**
	Max points for this criteria	***40***
Demonstrate a minimum of 5 years' experience of angling activity in the north-west. Skippers should specify number of licensed years spent angling. *Points will be allocated to a max. 30 points for 10+yrs* .	5 years	**10**
	More than 5 years but less than 10 years	**20**
	10 years or more	**30**
	Max points for this criteria	***30***
Cost - Complete form of Tender Appendix 3. **A rate per day for up to 10 days should be stated. This must include vessel charter and the provision of two experienced anglers.**	***Max points for this criteria***	***30***
	Max. Total Points	***100***

3. Tender Format

Tenders should be presented in the format and order laid out above under Section 2 Scope of Tender. Each of the sections should be clearly and separately marked and addressed in the order above.

4. Service Specification

The Marine Institute requires*:*

- Two separate charters of a fishing/angling vessel for a period of up to 10 days
- Scientific personnel to accompany each day for the purposes of tagging, retention of scientific samples and recoding of scientific data.
- Scouting areas where Bluefin tuna may be present based on previous experience or known captures to locate specimens for capture
- Capture by angling methods of a limited number of bluefin tuna specimens for tagging by scientific personnel on board.
- Release of tagged specimens

5. Currency

Prices must be in Euros € and be completed to two decimal places.

6. Validity of Tender

The Tenderer agrees that his/her tender shall remain open for acceptance for a minimum of 90 calendar days from the closing date for submission of tenders.

7. Cost of Tendering

Tenderers shall bear all costs associated with the preparation and submission of their tenders and the Client shall not be responsible or liable for any costs or expenses regardless of the conduct or outcome of the tender process.

8. Contract Terms

A Charter Agreement will be entered into with the successful tenderer. This Agreement will stipulate the details of the survey. Please see draft contract attached in Appendix 2.

9. Contract Notice

Each Tenderer's acceptance of delivery of this ITT constitutes its agreement to, and acceptance of, the terms set forth in the ITT.

10. Tax Clearance Certificate

Tenderers being awarded a public contract must have tax clearance. Applications for Tax Clearance Certificates can be made online and can be accessed at www.revenue.ie under "What can I do online", "Tax Clearance". The Marine Institute will verify the tax-clearance status of suppliers online before making payment.

11. Notice from Marine Institute

The Marine Institute may (up to three (3) working days prior to the deadline for receipt of tenders) issue a notice to all Tenderers, deleting, varying or extending any item in these documents. Tenderers shall immediately acknowledge the receipt of each such notice in writing addressed to the Marine Institute. Any such notice shall then become one of the Tender Documents and shall be treated as such by the Tenderer.

12. General Data Protection Regulations ("GDPR")

Please note that the Marine Institute will use your personal information in line with the General Data Protection Regulation ("GDPR"), the Data Protection Acts 2003 – 2018 and the Freedom of Information Act 2014. Please see our Privacy Statement / Data Protection Policy for further details on our use of your information. All tenderers are required to implement appropriate technical and organisational measures (in particular those required under the GDPR) to ensure a level of security appropriate to the risk to the security of Personal Data they process.

13. Tenderer's Queries and Clarification Requests

Any queries arising from the Tender Documents or the Instructions to Tenderers or information provided to the Tenderers shall be raised through www.etenders.gov.ie not later than five (5) working days before the closing date for return of Tenders.

14. Electronic Submissions

The Marine Institute will only accept responses electronically via the eTenders website http://www.etenders.gov.ie/. For comprehensive details on the eTenders Postbox policy, please refer to **Annex 1**.

15. Expressions of Interest

All parties that wish to be kept informed of any clarifications and/or all parties that wish to be kept informed of any clarifications and/or additional information regarding the tender should register their interest by registering on-line with e-Tenders (e-Tenders has been developed by the Department of Finance and is designed to help you find notices on government and public sector procurement across Ireland): http://www.etenders.gov.ie/

16. Closing Date for Tender Responses

All tenders must:

- Be received prior to **11:00 on Thursday the 15th AUGUST 2019.**
- Be submitted using the on-line http://www.etenders.gov.ie TENDER POSTBOX

For further information in using the Government's e-tenders system please refer to ***Annex 1***

Please note that non-conformance with these requirements will result in disqualification.

Please note that any information submitted may be subject to the Freedom of Information Act, 1997.

Annex 1 Marine Institute Etenders Postbox Policy

A User Guide to E-tenders and instructions on submitting a response through the e-Postbox may be found here:

http://etenders.gov.ie/Media/Default/SiteContent/UserGuides/etenders%20Supplier%20Quick%20User%20Guide.pdf

Please note:

The onus is on the applicant to ensure that the tender reaches the Marine Institute or e-tenders on time. It is not advisable to wait until the last moment to upload documents in case of internet connection difficulties or other technical problems. Neither the Marine Institute nor e-tenders take responsibility for documents which do not reach us by the deadline, for any reason.

Annex 2 Form of Tender

To: The Marine Institute

From *(Name of Tenderer)*: _____

I/We have reviewed the Invitation to Tender for *Bluefin Tuna Tagging Lots 1 & 2* and do hereby offer to provide the services set out therein, as may be required by the Marine Institute, in exchange for the following fee, which is inclusive of all costs, overheads and expenses:

Lot	**Fixed Cost per day (€) exc VAT, inclusive of all subsidiaries**	**Total Fixed Cost (x10 days) (€) exc VAT inclusive of all subsidiaries**
Lot 1 September	**€**	**€**
Lot 2 October	**€**	**€**

Fee is to be quoted in Euro (€), excluding VAT

If awarded this contract, the Tenderer accepts the terms of the **Bluefin Tuna Tagging** Contract

1. The Tenderer agrees to keep this offer open for acceptance by the Marine Institute for a period of 90 days from the deadline date for receipt of Tenders.
2. The Tenderer has read and confirms its acceptance of the Instructions to Tenders.
3. The Tenderer agrees to treat the details of this offer, together with any subsequent correspondence or contract, as private and confidential.
4. The Tenderer acknowledges that the Marine Institute shall not be responsible for any costs incurred by in the preparation of its Tender or any associated work effort, howsoever arising.
5. The Tenderer acknowledges that the essence of the public procurement process is that the Marine Institute shall receive bona fide competitive tenders from all Tenderers. In recognition of this principle, the Tenderer certifies that this is a bona fide tender, intended to be competitive, and that it has not fixed or adjusted the amount of the tender by or under or in accordance with any agreement or arrangement with any other Tenderer.
6. The Tenderer is aware of the prohibitions contained in Article 101 of the Treaty on the Functioning of the European Union (TFEU) and the Competition Act 2002.

Dated this _____ day of _____2019

Signature:

Print Name: _____

Address: _____

Contact No: _____

Appendix 3 Form of Tender

To: The Marine Institute

From *(Name of Tenderer)*: _____

I/We have reviewed the Invitation to Tender for *Bluefin Tuna Tagging Lots 1 & 2* and do hereby offer to provide the services set out therein, as may be required by the Marine Institute, in exchange for the following fee, which is inclusive of all costs, overheads and expenses:

Lot	**Fixed Cost per day (€) exc VAT, inclusive of all subsidiaries**	**Total Fixed Cost (x10 days) (€) exc VAT inclusive of all subsidiaries**
Lot 1 September	**€**	**€**
Lot 2 October	**€**	**€**

Fee is to be quoted in Euro (€), excluding VAT

1. If awarded this contract, the Tenderer accepts the terms of the **Bluefin Tuna Tagging** Contract
2. The Tenderer agrees to keep this offer open for acceptance by the Marine Institute for a period of 90 days from the deadline date for receipt of Tenders.
3. The Tenderer has read and confirms its acceptance of the Instructions to Tenders.
4. The Tenderer agrees to treat the details of this offer, together with any subsequent correspondence or contract, as private and confidential.
5. The Tenderer acknowledges that the Marine Institute shall not be responsible for any costs incurred by in the preparation of its Tender or any associated work effort, howsoever arising.
6. The Tenderer acknowledges that the essence of the public procurement process is that the Marine Institute shall receive bona fide competitive tenders from all Tenderers. In recognition of this principle, the Tenderer certifies that this is a bona fide tender, intended to be competitive, and that it has not fixed or adjusted the amount of the tender by or under or in accordance with any agreement or arrangement with any other Tenderer. The Tenderer is aware of the prohibitions contained in Article 101 of the Treaty on the Functioning of the European Union (TFEU) and the Competition Act 2002.

Dated this _____ day of _____2018

Signature:

Print Name: _____

Address: _____Contact No: _____

Appendix IV ICCAT's Electronic Tagging Record Table (TG03-EleTReRc_Ireland_BFT_2019)

Specimen identifier (unique)			Tagging															Time strata		Geographical strata			Fishing operation				
			RC	Electronic 1				Electronic 2				Conventional 1			Conventional 2												
ID	Species code	Sex code	RCStage code	Tag Code	Tag type	Tag color	Manufacturer	Tag Code	Tag type	Tag color	Manufacturer	Tag Code	Tag type	Tag color	Tag Code	Tag type	Tag color	Date	Time	Latitude	Longitude	Area Description	Vessel ID	Gear code	School type	Survey name (acronym)	Depth (m)
integer	T01	T02	T03		T21	T22	text		T21	T22	text	OTH	T21	T22	XX999999	T21	T22	yyyy-mm-dd	hh:mm	dd°mm.mm	ddd°mm.mm'[NS]	text (100)	Vessels	T05	T06	text (15)	integer
1	BFT	M	RC1	06AF0001	POP-UP	grn		06AF0001	POP-UP	grn		SS004051	STWT	grn	SS004051	STWT	grn	25/08/2007	08:45	15.12345	-17.01333	n/a	1	PS	FAD	CIV-ETRO005	1000
1	BFT	U	R-1	18P0292	POP-ARC	blg	Wildlife Computers					BYP030904	ST-DART1	yel	BYP77539	ST-DART2	yel	18/10/2019	14:20	54 32.84	8 35.84	Donegal, Ireland	2	TROL	FSC	IRELAND 2019	N/A
2	BFT	U	R-1	18P0302	POP-ARC	gra	Wildlife Computers					BYP030907	ST-DART1	yel		ST-DART2	yel	30/10/2019	13:09	54 29.232	8 43.391	Donegal, Ireland	1	TROL	FSC	IRELAND 2019	N/A
3	BFT	U	R-1	18P1500	POP-ARC	gra	Wildlife Computers	n/a	OTHR	red	Payne Labs		ST-DART1	yel	BYP79115	ST-DART2	yel	31/10/2019	10:00	54 29.44	8 43.19	Donegal, Ireland	1	TROL	FSC	IRELAND 2019	N/A
4	BFT	U	R-1	18P0268	POP-ARC	gra	Wildlife Computers	n/a	OTHR	red	Payne Labs	BYP030901	ST-DART1	yel		ST-DART2	yel	31/10/2019	12:12	54.29.976	8 44.054	Donegal, Ireland	2	TROL	FSC	IRELAND 2019	N/A
5	BFT	U	R-1	18P0260	POP-ARC	gra	Wildlife Computers					BYP03015	ST-DART1	yel	BYP79113	ST-DART2	yel	31/10/2019	12:15	54 29.56	8 44.1	Donegal, Ireland	2	TROL	FSC	IRELAND 2019	N/A
6	BFT	U	R-1	18P0892	POP-ARC	gra	Wildlife Computers					BYP030909	ST-DART1	yel	BYP77542	ST-DART2	yel	02/11/2019	09:13	54 29.655	8 41.004	Donegal, Ireland	2	TROL	FSC	IRELAND 2019	N/A
7	BFT	U	R-1	18P0308	POP-ARC	gra	Wildlife Computers					BYP030908	ST-DART1	yel	BYP77547	ST-DART2	yel	02/11/2019	11:02	54 27.009	8 43.24	Donegal, Ireland	2	TROL	FSC	IRELAND 2019	N/A
8	BFT	U	R-1	18P1065	POP-ARC	gra	Wildlife Computers					BYP030911	ST-DART1	yel	BYP77536	ST-DART2	yel	02/11/2019	11:52	54 29.614	8 42.105	Donegal, Ireland	2	TROL	FSC	IRELAND 2019	N/A
9	BFT	U	R-1	18P0270	POP-ARC	gra	Wildlife Computers					BYP030903	ST-DART1	yel	BYP77545	ST-DART2	yel	02/11/2019	12:35	54 29.592	8 41.911	Donegal, Ireland	2	TROL	FSC	IRELAND 2019	N/A
10	BFT	U	R-1	18P0300	POP-ARC	gra	Wildlife Computers					BYP030906	ST-DART1	yel	BYP79114	ST-DART2	yel	02/11/2019	13:55	54 28.796	8 40.362	Donegal, Ireland	2	TROL	FSC	IRELAND 2019	N/A
11	BFT	U	R-1	18P0293	POP-ARC	gra	Wildlife Computers				BYP030459 (WON'T ENTER IN NEXT CELL)		ST-DART1	yel	BYP79112	ST-DART2	yel	03/11/2019	13:08	54 30.021	8 42.159	Donegal, Ireland	2	TROL	FSC	IRELAND 2019	N/A
12	BFT	U	R-1	18P1027	POP-ARC	gra	Wildlife Computers					BYP030910	ST-DART1	yel	BYP79117	ST-DART2	yel	06/11/2019	13:16	54 29.724	8 43.167	Donegal, Ireland	2	TROL	FSC	IRELAND 2019	N/A