

36th MEETING OF THE PARTIES

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**SAFETY AT SEA FOR IATTC AND AIDCP OBSERVERS ON TUNA
PURSE-SEINE VESSELS**

This document was originally prepared in response to a request by the Members of the Inter-American Tropical Tuna Commission (IATTC) for an analysis of the cost of implementing a proposal on the safety of observers at sea ([IATTC-90 I-1](#)) submitted to the 90th meeting of the IATTC by the United States. Similar proposals were submitted to the 92nd meeting of the IATTC and the 35th Meeting of the Parties to the AIDCP in June 2017, but were not addressed due to lack of time; an updated proposal is presented at this 36th Meeting of the Parties (MOP-36 A-1). This document has been updated to September 2017.

1. BACKGROUND

The initial objectives of the on-board observer program for tuna purse-seine vessels were established during the 34th meeting of the IATTC in June 1977, and the funds for initiating the program became available in 1978. The 1992 La Jolla Agreement, replaced by the AIDCP in 1999, increased the observer coverage of vessels with carrying capacities greater than 363 t (Class 6) to 100%. From the beginning of this program, the Secretariat has considered it highly important that the observer training include a component on safety at sea.

It should be noted that, since late 2015, the observers aboard carrier vessels in the IATTC's program to monitor transshipments at sea (Resolution C-12-07) carry *Inreach* emergency communication devices. The 14 devices cost US\$ 4,200 (US\$ 300 each); service costs US\$ 20.45/month per device, for a total of US\$ 286.30/month and US\$ 3,435.60/year.

2. ELEMENTS OF SAFETY

AIDCP observer training includes a component on safety at sea, given by certified personnel from the relevant national authority or the International Maritime Organization (IMO). These courses include first aid, techniques for survival at sea, preventing and fighting fires, and personal safety and emergency procedures aboard the vessels in accordance with IMO standards.

In almost all countries, undergoing this training is a requirement for obtaining a seaman's license, without which an observer cannot embark. Previously, IATTC observers were reimbursed for the cost of this training, which varies between US\$ 300 and US\$ 500, but now must pay for it themselves. The original version of this document ([IATTC-90 INF-C](#)) included a proposal by the Secretariat that this cost should be borne by the observer program, not the observers, and be included in the IATTC and AIDCP budgets.

At sea, the observers depend on the vessel crew for communications, whether by e-mail, radio, or radiotelephone, and there is no protocol for which allows the observer to report cases of antagonism, interference, harassment, attempted bribery, or other hostile or difficult situations, confidentially to staff on land. Observers have instructions to add notes about such cases to their reports at the end of the trip, if they consider that doing so during the trip could be risky for their physical or mental well-being.

Therefore, the Secretariat considers that, to be sure that observers can do their job free from external pressures and in private, an independent communication system is necessary.

A final element to be considered is the situation of the observer falling into the water without the vessel

crew realizing. Currently, observers do not carry safety equipments that would help in locating or rescuing them in case of emergency.

3. ESTIMATED COSTS OF EQUIPMENT FOR SAFETY AT SEA

3.1. Two-way communication equipment

Costs: Equipment US\$ 450; annual operation US\$ 600; initial activation US\$ 25

The *InReach SE* device recommended by the Secretariat in 2016 is no longer available, but has been replaced by the very similar equipment shown here, which has a larger and brighter screen, but is functionally the same.

The Secretariat consulted with various observer programs that have implemented similar systems, and in nearly all cases they preferred systems that allowed communication by text and not by satellite voice telephony (which also reduces operating costs considerably). The *InReach SE+* system, which uses the Iridium satellite system, allowing text messaging with any mobile telephone, as well as geographical location-finding at intervals of from 2 to 10 minutes, seems best suited to the needs of this program.



The cost of operation of this device includes a service plan, similar to those in offered by conventional mobile telephony companies. The combination of device and operating plan proposed in this document allows an unlimited number of text messages in both directions.

The device is not completely waterproof, but is water-resistant for 30 minutes up to 1 meter deep.

3.2. Emergency position indicator radio beacon (EPIRB)

Cost: Equipment US\$ 250

This equipment, unlike the previous one, does not allow two-way communication. Its use is limited exclusively to signaling emergencies. When activated by the user, the device transmits a signal by satellite (COMSAT system) to a station on land that identifies the device and its location.

The EPIRB that seems best suited to the needs of the AIDCP program and that is used by other observer programs is the *ACR ResQLink 406*. The device is waterproof up to 5 m deep for 1 hour, and has a long-reach stroboscopic light.



Although there are no hard data on the average life expectancy of these electronic devices, the limited warranty is five years, and it is recommended that the battery is replaced after six years.

4. ANALYSIS OF COSTS ASSOCIATED WITH THE SAFETY AT SEA OF IATTC AND AIDCP OBSERVERS

Taking the above considerations into account, and assuming a five-year life expectancy for the devices, the estimated cost per vessel would be:

Cost per vessel (US\$)	Unit cost	Annual operation	Total first year	Annual cost, incl. replacement
Location and communication equipment:				
<i>InReach SE+</i>	450	-	450	90
Activation	25	-	25	5
Data plan	-	600	600	600
<i>ResQLink</i>	250	-	250	50
Total			1,345	745

The cost of a complete set of equipment, per vessel, is less than the average cost of a ton of yellowfin tuna and the annual cost of maintenance and operation is less than the cost of half a ton.

The Secretariat considers that this equipment should be purchased in sufficient quantities to ensure that every vessel participating in the AIDCP/IATTC On-board Observer Program has a complete set, thus serving also observers of the national programs.

In 2016, 216 tuna purse-seine vessels carried an observer on at least one trip. The Secretariat recommends that at least 220 sets are purchased, and more, thereafter, for every new vessel entering the fishery and requiring an observer.

Total cost of equipment for the program (US\$)	Unit cost	No. of units	Annual operation	Total first year	Annual cost, incl. replacement
Location and communication equipment:					
<i>InReach SE+</i>	450	220	-	99,000	19,800
Activation	25	220	-	5,500	1,100
Data plan	-	220	600	132,000	132,000
<i>ResQLink</i>	250	220	-	55,000	11,000
Total				291,500	163,900