IP video promotes sustainable fisheries.

Axis network cameras help on-board biologist observers in their work and assist in certification of fishing industry best practices.

Organization:
Association of Large Frozen Tuna Producers (OPAGAC)

Location:
Madrid, Spain

Industry segment:
Critical infrastructure

Application:
Remote monitoring

Axis partner:
Satlink

Mission

The Spanish tuna industry is number one in the European market and among the top-producing in the world, due on a large extent to its focus on industry sustainability. OPAGAC is Spain's principal organization of purse-seine fishing companies. The tuna fishing industry is highly regulated and through several administrative changes requirements by fisheries authorities have become increasingly demanding in regards to accountability of catches.

Solution

With the purpose of ensuring transparency of its activities, OPAGAC opted to voluntarily establish a pioneer fisheries monitoring system. The organization called upon the services of satellite telecommunications specialist and Axis partner, Satlink, for the development of the new SeaTube Electronic Observation System. The system required installing between six and eight IP cameras on each seiner ship and enables precise, 24-hour electronic monitoring from land.

Result

The system provides accurate, reliable and independent information to fisheries authorities and the community regarding fishing activities, methods, catch yields, discards and encounters with protected species. It has also increased observational data coverage in all types of fisheries and may be considered as an alternative method of data collection in situations where having an observer on board is not possible.

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"Using Axis network cameras along with Satlink Seatube system elements has allowed us to obtain complete certification that our catches are being made in a sustainable manner, and in compliance with the regulations in effect at all times and in all fishing zones."

Julio Morón, Managing Director of OPAGAC.

OPAGAC is a Spanish association of seine fishing enterprises operating in the three major oceans. The group's 38 ships operate under the jurisdiction of four principal Regional Fisheries Organizations (ORP's) for tuna, which are the agencies that assess the status of the species and manage fisheries (catch methods and quotas). OPAGAC has a longstanding history and respect for fishing in strict compliance with all management, procedures and international standards throughout all areas in which it operates.

Having biologists aboard is one of the most effective tools of the ORP's to evaluate the status of certain species and fisheries. At their recommendation, by shipowner decision or whether under mandate in closed zones or during certain time periods, most major worldwide fleets encounter the work of onboard observers. Their results are compiled in reports that serve as verification of offshore operational compliance with the regulations in place, and in such cases best practices certification is granted.

With the aim of improved sustainability for tropical tuna fisheries, OPAGAC turned to Satlink to develop a solution that would allow for the recording of fishing activity to supplement existing observer programs, and the result was Satlink Seatube. The system consists of a network made up of six to eight IP cameras from Axis Communications, primarily the AXIS P3364-VE, located at various strategic points in the common areas of each ship (around 90 square yards). This allows for recording high-definition imagery of fishing operations to a local NVR (and/or live broadcast via satellite) and image archival that includes corresponding satellite location metadata.

Optimum camera installation was determined after a detailed situational analysis and features of the AXIS P3364-VE, such as those enabled by Lightfinder technology, were key to incorporating the solution.

The Satlink SeaTube system's minimum storage capacity is four months of archived recording and includes an alarm module that allows for control of over 200 system states such as camera blur or electricity loss. The system is modular and scalable, providing redundant storage of secure watermark-encrypted data that makes it possible to detect any type of manipulation or alteration.

As soon as a ship arrives in port, data drives are removed and retained by authorities. Next, an independent inspection by Satlink subsidiary Digital Observer Services (DOS) takes place where the recording is reviewed using Satlink View Manager software. Then, a complete report is produced on the ship's activity, catch and accessory species encounters. Recordings are kept for two years so that they can be reviewed by any necessary organization or administration. In addition, feedback from DOS management has been used to optimize the design of cases and other accessories developed by Satlink that allow the IP cameras to withstand demanding high seas operating conditions.

A proposal is in the process of being approved for implementation of the system into in all fleets operating in international waters, after having already been installed successfully in large purse-seine vessels and in smaller boats.

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