

More focus on Fishery Research?

We have seen it coming, and we have been waiting for it; the need for more focus on fishery research. There has been a negative development in commercial fisheries many places, and for various profitable species, around the world. The reasons are many; overfishing, lack of control – but just as often; it is a lack of government support and interest in developing sustainable fisheries. Why is this? The answer is very simple; No understanding of the nature of the fishing industry.

Generally speaking, it is tempting to say that governments only believe that the means for a viable fishing industry are restrictions, regulations and quota reductions. And we see the results:

- A fishing fleet that is getting older every year
- Restrictions, quota reductions and ever increasing operations and maintenance costs
- No, or very limited, development of modern equipment, fishing gear and methods
- Maybe worst of all, and perhaps a result of what is mentioned above; virtually no recruitment of young people to the industry

Instead of a viable fishing industry, the results are an industry struggling to survive and a frustration forcing those involved to hold back on investments and maintenance, which is essential to any industry. The situation is getting worse and worse and many just feel forced to try to find solutions to survive. It is a shame.

Ever since the start more than 30 years ago, Scanmar has had close contacts with Fishery Research Institutes and researchers all over the world. These relationships have been mutually beneficial. The Fishery Research environment has received new state of the art technology at low cost due to developments paid for by the private sector. On the other hand, Scanmar has been invited to participate in surveys where Scanmar's technology has been necessary to investigate new areas, such as deep sea biomass etc., and has made observations that have formed the basis for new developments.

To Scanmar, Fishery Research is much more than just acoustic surveys and trial surveys in order to establish quotas:

In addition to the 250 especially equipped fishery research vessels with Scanmar systems, a great number of commercial fishing vessels are hired annually to do



special tasks. Research is performed on new fishing gear construction, gear efficiency on various species under various conditions, sorting methods etc. Much of this is done with Scanmar equipment and with Scanmar's cooperation in use of the equipment and assessments and evaluations of the results.

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Scanmar's involvement has helped us gain much experience and knowledge on top of what the Fisheries Research institutes have, especially when we combine it with experience from commercial fishing vessels.

There is no question that many Fisheries Research Institutes are doing an excellent job with some of the tasks they are doing, but those are generally very specific projects or surveys, and from our position there seems to be a lack of coordination within the institutes and across the board.

Who has the total overview? Even in institutes spending vast amounts of money, the achievements are small. Various departments are running their own projects and fighting for their own budgets. The main task for management is not to rock the boat. It could lead to budget cuts which in many places is actually the situation.

However, we have been involved in projects where obviously the aim is right, and that pleases us a lot. We will continue to present some experiences and results on our web site. As a little, and to many an insignificant example, we would like to mention a project the Russian Far Eastern Fishery Research Institute TINRO has conducted in the Bay of Peter the Great, near Vladivostok.

Scanmar has participated in the project with people and equipment. We cannot claim to understand the value of the results for the commercial fisheries in the area, but we are fascinated. The purpose of the project is to study the efficiency of different lengths and angles of sweep lines on various species.

Why we are fascinated? The way we understand it, the results may be used for maximum efficiency, combined with selectivity. This is obviously a step in the right direction. A small achievement, OK, but it leads to the core of this article: What do we have to do to establish a viable fishing industry?

This article is not about what benefits the use of Scanmar systems can provide in regards to better, more reliable and trustworthy information for estimation of biomass and establishment of quotas. That is well documented elsewhere.

Our contribution is different: We have to bring to the table our opinion on what our experience tells us what should be done if want to have a viable fishing industry in 15 years. To make it short:

- 1. There is a great need for replacing old fishing vessels with new:
 - Operation and maintenance costs destroy profitability.
 - Wages and conditions are not attractive to young people.

- 2. Need for recruitment of young people:
 - Utilization of new high-tech equipment.
 - Development and improvements of new fishing gear and methods.

The situation has been growing worse for decades and it is escalating every year. Today, it is critical. The income from fishing is not able to support the necessary investments in new efficient fishing vessels, and it is obvious that a reduction of the existing fleet has to take place to balance the catching capacity with the resources available.

But that is not enough. Fishing itself has to become more efficient; Organizing, planning and catching have to become more structured and more efficient. That is not only necessary for the immediate economics of the fishing fleet; it will have great impact on other parts of the industry: processing and distribution, shipbuilding, development of fishing gear and equipment, and, most of all, recruitment of skilled and motivated people to the industry.

Even though we could point at several things we have observed we will restrict ourselves to what we know best: catching efficiency, specifically trawling.

Trawl equipment (design, size, etc.) and trawling techniques (rigging, towing speed, on so on) were developed at a time when observation of the efficiency were difficult and when practically nothing was done. Any development was based on trial and

error and the individual fisherman's experience. And it was hard to estimate the impact of wind and waves, sea bed conditions, underwater currents, and so on.

In general terms, based on what we have seen recorded by numerous vessels using Scanmar, there are lots to be achieved. There are other things, but we are limiting



ourselves to observations made with the most advanced, and today, most important sensors: Trawl Eye, Flow sensors, Door Angle sensors and Twist- and Filling sensors on the net and cod end. The most serious problems are:

- Wrong towing speed causes fish to disappear either in front of the trawl or through the panels due to bucket effect and twisted net
- Wrong door angles due to wrong sizes, incorrect rigging, towing speed, etc.
- Low water flow in trawl due to construction or towing speed

The most advanced and modern vessels have the necessary equipment and the skippers and crew are able to make the necessary changes and adjustments themselves, but what about the numerous small trawler owners that never can afford the investments? There must be a challenge for the authorities to assist them in making a decent living. It is not a big task to help developing efficient fishing gear and support and train the fishermen, but it is urgent.

At least if we want to recruit young people to the industry, which again is a prerequisite for a viable fishing industry in 15 years time.

Lots and lots of Fishery Research surveys are suffering the same shortcomings! What are the consequences of that?