This Fisheries Diversification Program (FDP) project was carried out in the Fortune Bay area to demonstrate and evaluate the performance of a modified herring wing trap as an alternative to the more traditional bar seine, gillnet and/or conventional herring trap.

**Background**

Increased fixed gear herring quotas for Fortune Bay over the past five years have resulted in increased harvesting effort by operators of small to medium-size vessels. Until this year, the trap allocation of the fixed gear quota was not fully taken. Fifty percent or less was taken in previous seasons.

Department of Fisheries and Aquaculture officials worked with Eric Banfield, a fisher from Bay L'Argent, to modify a herring wing trap to include extended winker panels and a ramp.

**Methodology**

A used herring wing trap was purchased by Eric Banfield for modification.
The trap measured 8 fms. by 61 fms. and, after the extended winkers and ramp were installed, it was set at a berth known as Swile Point near Long Harbour, Fortune Bay. The water depth was approximately 10 fms.

There were 27 trips made to and from the trap in the Long Harbour area of Fortune Bay between March 15 and May 31, 2002, covering a distance of some 28 miles. However, the trap was only hauled 18 times, as weather and tides permitted or when there was enough herring to make the trip worthwhile.

The average catch amounted to 43,000 to 50,000 pounds of herring, and was landed at Bay L’Argent. Daily logs were prepared and submitted for this project.

**Results**

This trap appeared to be very effective. In fact, on times the trap was so effective during the test period, the complete amount of herring in the trap could not be taken in one haul.

It was necessary to use a ‘tuck’ seine to take out smaller amounts of the catch without killing all the fish entrapped.

The remaining live herring were ‘let down’ after the boat was filled to capacity (between 80,000 and 90,000 lbs.). Those herring were recovered in good condition in the next haul.

This capability would be especially important when windy weather and rough conditions prevent harvesters from travelling to the traps on a particular day.

Another advantage to the modified trap is that it supports positive conservation principles. Undesired catch, such as small herring, could be released with zero mortality.

The herring wing/ramp trap harvested 70% of the entire 500 mt trap quota or 14% of the entire Fortune Bay fixed gear quota (bar seine, gillnet and trap) of 2,500 mt. Because of this success, other local fishers are now contemplating making similar traps.
It is worth mentioning that another fisher, Gary Snook of Harbour Breton, made modifications to his Japanese bait traps as well.

Like the trap Mr. Banfield was using, the ramp can be pulled up, allowing the herring to move freely until they can be taken out in smaller amounts. The results were equally successful. Traditional traps normally harvest between 10,000 lbs. and 50,000 lbs. per haul.

Traps used in this FDP project, and those used at Harbour Breton by Gary Snook, are capable of 100,000 lbs. to 200,000 lbs. per haul, depending on a vessel's carrying capacity.

Between these two users of modified traps, the entire trap quota for Fortune Bay was harvested, Eric Banfield using one trap and Gary Snook using two.

Eric Banfield believes the new design has the potential of having a very positive economic impact on the area with special benefits for small to mid-size boat fishers.

He adds that other species such as squid and mackerel could also be targeted with this type of trap.

**Conclusion**

Based on catch rates recorded during this project in Fortune Bay, wing/ramp traps outperform the more traditional traps. It appears the positive results are due primarily to better design features that allow the retention of herring while continuing to fish. This would be particularly beneficial if rough weather conditions prevented fishers from reaching their traps or if a vessel's carrying capacity was insufficient to transport the entire catch.

Adding to the success of this project was the professional experience of the local people involved, the test area being a good location for the herring wing/ramp trap, and a good supply of herring in the area during the test period.

Along with other positive design features, wing/ramp traps can be very environmentally friendly, allowing the operator control over the amount of herring to be "dried up" or test sampled at any one time, thereby avoiding unnecessary or wasteful fish kills.

Detailed plans showing all the relevant dimensions and diagrams of the trap are available at your nearest Department of Fisheries and Aquaculture office.

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 Trap walls of herring wing trap. (Dimensions are shown in feet.)
There were 27 trips to the trap during this project.

Near Long Harbour, Fortune Bay.

The $10 million Fisheries Diversification Program is part of the $81.5 million Canada-Newfoundland Agreement Respecting the Economic Development Component of the Canadian Fisheries Adjustment and Restructuring Initiative.