



International Atlantic Salmon Research Board

ICR(17)4

*Application for funding to the International Atlantic Salmon Research Board
Salmon at Sea: a 'likely suspects' approach to guiding research*

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The Proposal - summary

SALSEA identified potential sources of mortality during the initial smolt migration to feeding grounds but it did not aim to quantify or fully understand these. It is evident however, that since these factors can vary in time and space, such variation may be expected to account for some if not most of the variability in return rates observed among salmon stocks and between years. As plans for new research develop, it is necessary to consider how that research can be targeted and prioritised. The overview accompanying this application suggests that it is possible to identify an overall strategic framework that would provide coherent guidance in this regard.

A strategic approach is proposed that would place candidate mortality factors within an overall spatio/temporal framework of salmon throughout the marine phase, with a view to quantifying the potential of each factor to influence survival (the “likely suspects”) and to link these dynamically in such a way that the cumulative effects of these factors is made to account for the observed survival variations in cohorts of salmon.

Given the number of, and variation in, likely factors influencing mortality at sea, the approach is not designed to be modelling in the meaning of inputting variables to test or predict outcomes, but is more akin to an “accounting exercise” and can be used to identify the likely impact both individually and cumulatively of the “suspects”. A key objective is to prompt specific testable hypotheses about the operation of the factors involved and hence aid targeting of research to further refine the estimates of the potential scale of mortality at each part of the marine phase. A particular focus would be on identifying where and how mortality factors had changed between earlier periods of higher marine survival and the more recent/current low survival phase.

Funding Requested

At this early stage of development of the likely suspects concept, the AST is in discussion with a number of scientists in relevant fields in Europe and North America and also with our partner organisation the Atlantic Salmon Federation (ASF). As part of the concept development, the AST is seeking a contribution of £5,000 from NASCO IASRB to help organise and run a scientific workshop of 6 to 8 specialists in Autumn 2017. If this is not possible the endorsement of the Board for the project concept and approach would be very welcome. The planned workshop would examine in detail the feasibility of the proposed framework and support the development of a consortium bid for funding in the form of a Concerted Action of other appropriate science support mechanism. AST has funded the work to date and will continue to support its further development on a partnership basis into the future.

Workshop Budget

It is difficult at this time to give a precise budget for the organisation and running of the workshop but the following are the approximate costs – on the basis of a six person meeting, two from North America and 4 from Europe:

Further Development of Concept and preparation for workshop:

	£3,000 (consultant)
Travel and accommodation costs	£6,800
AST – staff time	£2,500
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Total:	£12,300

Time Frame

It is envisaged that the workshop would be organised in Edinburgh in late September / October 2017 and that a report on the meeting and a detailed, costed research proposal would be completed by January 2018.

The Workshop Team

The workshop will be organised by the Atlantic Trust Executive Team in conjunction with Professor Walter Crozier, who is currently on contract to AST to develop the Suspects Framework.

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