

SALSEA Overview

SALSEA comprises four work packages and tasks to examine key hypothesis.

Work Package 1: Supporting Technologies

This Work Package aims to:

- allow identification of the origin of salmon sampled at sea through genetic stock identification methods;
- enhance the efficiency of sampling of salmon at sea through the development of improved research gear; and
- identify growth histories of salmon at sea through the development of standardised scale analysis techniques.

Work Package 2: Early Migration through the inshore zone - fresh waters, estuaries and coastal waters

The factors affecting mortality of salmon at sea include those operating in fresh water which influence the fitness of emigrating smolts during the marine phase or the salmon's ability to move from fresh to saline water (and back); and man-made factors operating in the coastal zone (e.g. aquaculture). This Work Package aims to investigate:

- the influence of biological characteristics (e.g. size) of salmon smolts on marine mortality;
- the impact of physical factors in fresh water (water flow and temperature) on marine mortality of salmon;
- the influence of freshwater contaminants on marine mortality of salmon;
- the mortality due to predation in the inshore area; and
- the impacts of aquaculture on marine mortality of wild salmon.

Some of this research is currently ongoing, largely funded by national agencies or partnerships with national agencies. The IASRB seeks to enhance co-ordination of this research and to stimulate additional financial support.

Work Package 3: Investigating the Distribution and Migration of Salmon at Sea

This Work Package involves a comprehensive, multi-disciplinary post-smolt survey throughout the salmon's North Atlantic range. Work in this area has received limited funding to date, and is a priority in *SALSEA*. This Work Package aims to:

- develop theoretical migration models from existing data so as to facilitate well-targeted marine surveys;
- develop a detailed plan for the marine survey, including standardization of survey techniques;
- conduct the comprehensive North Atlantic-wide survey to collect information on migration patterns, distribution and possible factors affecting mortality of salmon at sea; and
- collate and analyse the data so obtained.

Work Package 4: Communications

This Work Package describes how *SALSEA* will be promoted to potential funders and how information on the programme and its findings will be disseminated among scientists, managers and the general public. The approaches proposed include development of a fund-raising strategy; implement a major international public awareness programme; and convene a

major international 'salmon summit' in 2010 to review marine salmon research in both the Pacific and Atlantic Oceans.