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The total return of Fraser River sockeye in 2009 was the lowest in over 50 years. This was only a small fraction of the number expected. The productivity of Fraser River sockeye salmon, which is the number of adults produced per spawner, has been declining since the mid-1990s to the point where Fraser River sockeye are almost unable to replace themselves.

We believe that expectations in 2009 for Fraser sockeye were overly optimistic because forecasts did not adequately account for this decreased productivity. This trend is not due to fishing. In 2009 management responded appropriately by greatly restricting fishing to maximize the number of fish available for spawning. The weight of evidence suggests that the problem of reduced productivity occurred after the juvenile fish began their migration toward the sea.

There is a need to increase Canadian research and action on the marine coastal environment and on climate impacts. Specifically, the following four research activities are vital to address critical knowledge gaps regarding the declining productivity problem.

Climate change poses a major threat to the future of Fraser River salmon, not only through direct effects of temperature on the fish, but also through impacts on food webs and habitats. Management agencies must take this information into account in order to meet the objectives of Canada's Wild Salmon Policy, which include maintaining biodiversity as well as monitoring and protecting habitat.

These are clearly challenging times for Fraser River sockeye salmon. The scientists in the Think Tank are confident that taking the appropriate research initiatives and management actions immediately will improve the prospects for these fish and their ecosystems, to the benefit of the many people who depend upon them.

For more visit or website: http://www.sfu.ca/cstudies/science/adaptingtochange.htm