A multidisciplinary rapid appraisal technique ("Rapfish") was used in the comparative evaluation of the "health" or sustainability status of 25 herring fisheries across the North Atlantic and NE Pacific from 1950 – 2009 at fiver year intervals. 42 scored attributes in ecological, economic, social, technological, institutional and ethical fields were analysed. Comparisons were made among the countries. Comparisons were made within fisheries over time for selected time periods and between fisheries for the same time periods. Monte Carlo re-sampling was used to analyze uncertainty. Leverage analysis examined the sensitivity of status results to each attribute in the six evaluation fields. Lack of reliable fisheries stock assessment data varies with each fishery over time; however, this paper demonstrates that the approximate relative status of fisheries can be obtained using attributes which are relatively easy to score in a transparent fashion with defined uncertainty. Sustainability levels vary across time and between fisheries with four key influences determined: market demand; efficiency of fishing technology; environmental conditions; and management/regulations.