The long-term variations of the input loads of organic matters (BOD and COD) and nutrients (TN and TP) from river into sea were evaluated. The public water quality observation data set of Akashi river basin (128.4 km2) in the Seto Inland Sea was used, and the population and the land use data were analyzed by GIS technique. The results showed 1) BOD and COD input loads from the late 1970s to 2000s have been reduced by 84% and 69%, respectively, 2) BOD input load including sewage-treated water has been reduced by 40% from the late 1970s to 2000s, while COD input loads are not reduced (6% increase), and 3) BOD and COD input loads into the Seto Inland Sea were provided 70% by the sewerage and did 30% by the river. These results indicate the sewerage development makes the restriction of organic pollution and eutrophication not only rivers but seas though the population increased about three times since 1980s.