

# SOURCE APPORTIONMENT OF POLYCYCLIC AROMATIC HYDROCARBONS (PAHS) IN SMALL CRAFT HARBOR (SCH) SURFICIAL SEDIMENTS IN NOVA SCOTIA, CANADA



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***As there has yet to be a comprehensive analysis of PAH source apportionment for surficial sediments in Nova Scotia, this paper aims to address this knowledge gap by characterizing PAH sources collected from Nova Scotian SCHs.***

## **APPROACH:**

Sediment data for this study was collected from 31 SCHs in Nova Scotia between 2001 and 2017. Researchers used three lines of evidence to examine the results: PAH diagnostic ratios, Unmix Optimum receptor modeling, and by assessing the composition of the PAH profile.

## **MAIN FINDINGS:**

- All three lines of evidence support the claim that Nova Scotia sediments are primarily impacted by combustion sources. This can most likely be attributed to coal combustion processes and the incineration of wood products and vehicular usage by Nova Scotian residents.
- Findings of this study suggest that NS aligns with global trends in that pyrogenic PAHs tend to dominate sediments and that the origin of these PAHs is greatly influenced by various anthropogenic combustion activities.