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## **G11. Environmental factors influencing distribution of Archaea in tropical coastal waters**

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We explore the archaea diversity in four locations along the Straits of Malacca, which is a semi-enclosed narrow tropical sea that connects the Indian Ocean to the South China Sea. Samples from these different environments were collected and four 16S rDNA clone libraries were constructed with archaea specific primers (Arc21F and Arc958R). In total, 1074 randomly selected clones were screened by PCR-restriction fragment length polymorphism (PCR-RFLP) analysis using three different restriction enzymes (*RsaI*, *CfoI*, and *DdeI*). Archaeal operational taxonomic units (OTUs) were defined as sequences which are  $\geq 97\%$  similar. Diversity index were determined for each clone library which has a Good's coverage of more than 85%. Relationship between OTUs with environmental variables were analysed with canonical correspondence analysis (CCA). Majority of the sequences from three clone libraries were affiliated to Euryarchaeota, except for one clone library which were dominated by Thaumarchaeota sequences. This could be due to the higher chlorophyll *a* concentrations. Sequences obtained indicate that tropical waters along the west coast of Peninsular Malaysia harbour a rich diversity of Archaea.