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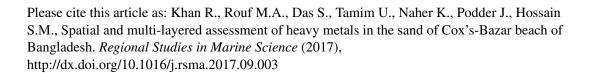
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Spatial and multi-layered assessment of heavy metals in the sand of Cox's-

**Bazar beach of Bangladesh** 

Rahat Khan<sup>a</sup>,\*, Mohammad Abdur Rouf a,b, Sopan Dasa, Umma Tamima, Kamrun Nahera,

Jiban Podder<sup>b</sup> and Syed Mohammod Hossain<sup>a</sup>

<sup>a</sup>Institute of Nuclear Science & Technology, Bangladesh Atomic Energy Commission, Savar,

Dhaka-1349, Bangladesh.

<sup>b</sup>Department of Physics, Bangladesh University of Engineering and Technology, Dhaka-1000,

Bangladesh.

(\*Corresponding author: khan-rahat@baec.gov.bd; rahatkhan.baec@gmail.com)

**Abstract** 

This study presents the elemental abundances of beach sands collected from Cox's Bazar,

Bangladesh for the purpose of understanding the spatial and layer-wise distribution of heavy

elements and their provenance. Sand samples were collected from six different stations and from

each sampling stations five samples were collected according to the sampling depth. Thus, in

thirty sand samples, nineteen elements (Na, K, Sc, Cr, Fe, Co, Zn, As, La, Ce, Sm, Eu, Gd, Tb,

Yb, Hf, Ta, Th and U) were determined by TRIGA Mark II research reactor based instrumental

neutron activation analysis. Enrichment of some heavy metals, such as Fe, La, Ce, Sm, Hf, Ta,

Th and U are due to the presence of some heavy minerals (i.g., monazite, magnetite, ilmenite).

Study of environmental indices and the probable sources of anthropogenic origins indicate that

the impact of anthropogenic heavy metals is negligible in our study area.

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