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| Please detail the nature and extent (%) of contribution by the candidate:  ***Chapter 2:*** *Peter Kuma participated on methodology development, voyage observations, data analysis, writing and reviewing of the manuscript. Extent: approx. 70%.*  ***Chapter 3:*** *Peter Kuma wrote the code of the framework, performed the data analysis of the case studies and wrote the text of the manuscript. Extent: approx. 70%.*  ***Chapter 4:*** *Peter Kuma participated on the TAN1802 field measurements, performed the model runs, analysis and wrote the manuscript. Extent: approx. 70%.*  *Please see also “Author contributions” at the end of Chapter 2, 3 and 4 for details.* |

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