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Nota di contenuto	Dirty Containers: A Measurement and Cost Estimation Approach of Atmospheric Pollution in Hong Kong; PREFACE; LIST OF CONTENTS; APPENDICES; LIST OF TABLES; LIST OF ILLUSTRATIONS; ABBREVIATIONS; 1 INTRODUCTION; 1.1 APPROACH AND MOTIVATION; 1.2 OBJECTIVE AND METHODOLOGY; 2 SHIPPING AND AIR POLLUTION; 2.1 GLOBAL TRANSPORTATION AND CO2 EMISSIONS; 2.2 EFFECTS OF ATMOSPHERIC POLLUTION; 2.3 EMISSIONS PATHWAY IN TRANSPORTATION AND SHIPPING; 2.4 REGULATORY REQUIREMENTS TO GREENER SHIPPING; 3 ENVIRONMENTAL COSTS; 3.1 INTERNALIZATION OF EXTERNAL COSTS; 3.2 MONETARY VALUATION 3.3 ESTIMATION OF EMISSION COSTS IN SHIPPING 3.3.1 TOP-DOWN APPROACH; 3.3.2 BOTTOM-UP APPROACH; 4 LITERATURE LINKED TO WEB-BASED CALCULATION METHODS OF EMISSIONS FOR INTERNATIONAL SHIPPING ACTIVITIES; 5 METHODOLOGY OF ECOTRANSIT WORLD: MEASUREMENT OF ENERGY CONSUMPTION AND EMISSIONS LINKED TO INTERNATIONAL SHIPPING; 5.1 BACKGROUND

AND ENVIRONMENTAL INDICATORS; 5.2 ENERGY CHAIN AND BASIC CALCULATION RULES; 5.2.1 ENERGY CHAIN AND UPSTREAM PROCESS; 5.2.2 BASIC CALCULATION RULES; 5.3 ENVIRONMENTAL DATA FOR CONTAINER VESSELS; 5.3.1 MARINE EMISSION FACTORS 5.3.2 CLASS AND TRADE-LANE SPECIFIC EMISSION FACTORS 5.3.3 DERIVATION OF INDIVIDUAL VESSEL EMISSION FACTORS; 5.4 DATA METHODOLOGY ASSUMPTIONS AND SOURCES; 5.4.1 CONTAINER VESSEL ROUTING; 5.4.2 CONTAINER VESSEL CAPACITIES; 5.4.3 MAIN ENGINES AND AUXILIARY ENGINES; 5.4.4 OTHER ASSUMPTIONS FOR CALCULATING MARINE VESSEL EMISSIONFACTORS; 5.5 CONSIDERATIONS OF REDUCED VESSEL SPEED; 5.6 RELEVANT ONLINE DATA INPUT AND GENERATED OUTPUT; 5.6.1. RELEVANT ONLINE DATA INPUT; 5.6.2. GENERATED DATA OUTPUT; 5.7. UNCERTAINTIES 6 TRADE-LANE SPECIFIC ENERGY CONSUMPTION, GHG EMISSIONS, COSTS ESTIMATION AND KPIS OF HONG KONG CONTAINER TRADE ACTIVITIES 6.1 HONG KONG ROLE AS CONTAINER (TRANSHIPMENT) HUB; 6.2 LADEN CONTAINER THROUGHPUT DEVELOPMENT; 6.3 INPUT BOUNDARIES AND ROUTING CONTROVERSIES; 6.3.1 INPUT BOUNDARIES; 6.3.2 ROUTING CONTROVERSIES; 6.4 RESULTS FROM ECOTRANSIT WORLD; 6.4.1 TRADE-LANE SPECIFIC CONTAINER FACTORS; 6.4.2 PRIMARY ENERGY CONSUMPTION.; 6.4.3 SULPHUR OXIDE AND PARTICULATE MATTER; 6.4.4 CARBON DIOXIDE AND CARBON DIOXIDE EQUIVALENT; 6.5 COST ESTIMATION 6.6 KEY PERFORMANCE INDICATORS AND COMPARISON OF EMISSIONTRADE-LANE DATA 6.6.1 KEY PERFORMANCE INDICATORS (KPIS); 6.6.2 COMPARISON OF EMISSION TRADE-LANE DATA; 7 CONCLUSIONS; REFERENCES; APPENDICES; APPENDIX 1;; APPENDIX 2;; APPENDIX 3;; APPENDIX 4;; APPENDIX 5;; APPENDIX 6;; APPENDIX 7;; APPENDIX 8;; APPENDIX 9;; APPENDIX 9;; APPENDIX 10;; APPENDIX 11;; APPENDIX 12;; APPENDIX 13;; APPENDIX 14;; APPENDIX 15;; APPENDIX 16;; APPENDIX 17;; AUTHOR'S PROFILE

Sommario/riassunto

Hauptbeschreibung Globalization is regarded as the key driver of growing container trade activities due to economic development. With a technology relying heavily on the combustion of fuel, international shipping is responsible for 2.7 percent of total world emissions and ocean transportation is becoming increasingly linked to environmental problems. The concepts of sustainability and greener shipping are expected to be the prime focus of transportation in the coming decades, but the impending developments require a deep understanding of the emission impact and costs related to the
