

Supplementary data

An Appraisal of Green Gross Provincial Product of a Tourist Island - An Analysis Focusing on Phuket

Table A1. A code system

NESDC system	Abbreviated names
Agriculture, forestry, and fishing	Agriculture
Mining and quarrying	Mining and Quarrying
Manufacturing	Manufacturing
Electricity, gas, steam and air conditioning supply	Energy Supply
Water supply; sewerage, waste management and remediation activities	Water Supply and Cleaning Activities
Construction	Construction
Wholesale and retail trade and repair of motor vehicles	Trade Activities
Transportation and storage	Transportation and Storage
Accommodation and food service activities	Accommodation and Food Service
Information and communication	Information and Communication
Financial and insurance activities	Finance and Insurance
Real estate activities	Real Estate
Professional, scientific, and technical activities	Research
Administrative and support service activities	Administrative Activities
Public administration and defense; compulsory social security	Public Administration and Social Security
Education	Education
Human health activities	Human Health
Arts, entertainment, and recreation activities	Arts, Entertainment, and Recreation
Other service activities	Other Activities

Table A2. Thailand industrial coefficient matrix A

		Agriculture, forestry and fishing	Mining and quarrying	Manufacturing	Electricity, gas, steam and air conditioning supply	Water supply; sewerage, waste management and remediation activities	Construction	Wholesale and retail trade and repair of motor vehicles	Transportation and storage	Accommodation and food service activities	Information and communication	Financial and insurance activities
		001	002	003	004	005	006	007	008	009	010	011
Agriculture, forestry and fishing	001	0.096	0.000	0.091	0.001	0.000	0.007	0.000	0.002	0.126	0.000	0.000
Mining and quarrying	002	0.000	0.028	0.012	0.161	0.000	0.078	0.000	0.000	0.000	0.000	0.000
Manufacturing	003	0.125	0.063	0.550	0.043	0.074	0.549	0.046	0.143	0.351	0.055	0.095
Electricity, gas, steam and air conditioning supply	004	0.005	0.009	0.025	0.029	0.143	0.006	0.027	0.011	0.089	0.040	0.015
Water supply; sewerage, waste management and remediation activities	005	0.001	0.000	0.001	0.000	0.034	0.001	0.002	0.001	0.005	0.001	0.001
Construction	006	0.001	0.000	0.001	0.001	0.000	0.001	0.003	0.001	0.004	0.000	0.002
Wholesale and retail trade and repair of motor vehicles	007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Transportation and storage	008	0.003	0.015	0.006	0.002	0.000	0.036	0.023	0.102	0.002	0.022	0.009
Accommodation and food service activities	009	0.001	0.002	0.001	0.001	0.000	0.004	0.001	0.010	0.002	0.003	0.012
Information and communication	010	0.003	0.001	0.002	0.002	0.000	0.001	0.008	0.005	0.012	0.199	0.077
Financial and insurance activities	011	0.024	0.135	0.021	0.043	0.081	0.040	0.069	0.066	0.035	0.090	0.130
Real estate activities	012	0.000	0.001	0.001	0.000	0.000	0.001	0.009	0.006	0.006	0.012	0.018
Professional, scientific and technical activities	013	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.001
Administrative and support service activities	014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
Public administration and defence; compulsory social security	015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Education	016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Human health activities	017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002
Arts, entertainment and recreation	018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.000
Other service activities	019	0.001	0.002	0.005	0.004	0.011	0.003	0.004	0.009	0.002	0.009	0.016
Fuel combustion	020	0.041	0.123	0.017	0.090	0.006	0.024	0.009	0.228	0.018	0.014	0.018
Pipe line and gas distribution	021	0.000	0.001	0.005	0.210	0.000	0.000	0.000	0.069	0.014	0.001	0.001
Fertilizer	022	0.106	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

		Agriculture, forestry and fishing	Mining and quarrying	Manufacturing	Electricity, gas, steam and air conditioning supply	Water supply; sewerage, waste management and remediation activities	Construction	Wholesale and retail trade and repair of motor vehicles	Transportation and storage	Accommodation and food service activities	Information and communication	Financial and insurance activities
		001	002	003	004	005	006	007	008	009	010	011
Waste	023	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.001	0.002	0.000	0.003
Wages and salaries	201	0.184	0.170	0.072	0.160	0.247	0.079	0.183	0.133	0.110	0.165	0.226
Operating surpluses	202	0.381	0.229	0.107	0.117	0.216	0.102	0.507	0.135	0.142	0.228	0.264
Depreciations	203	0.031	0.118	0.037	0.117	0.164	0.054	0.071	0.062	0.054	0.130	0.056
Indirect taxes less subsidies	204	-0.006	0.101	0.048	0.018	0.019	0.014	0.035	0.018	0.025	0.029	0.050
Gross value added	209	0.590	0.617	0.264	0.411	0.646	0.249	0.797	0.347	0.332	0.552	0.597
	210	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Table A2. Thailand industrial coefficient matrix A (cont.)

		Real estate activities	Professional, scientific and technical activities	Administrative and support service activities	Public administration and defence; compulsory social security	Education	Human health activities	Arts, entertainment and recreation	Other service activities	Fuel combustion	Pipe line and gas distribution	Fertilizer	Waste
		012	013	014	015	016	017	018	019	020	021	022	023
Agriculture, forestry and fishing	001	0.001	0.000	0.000	0.000	0.017	0.027	0.019	0.018	0.000	0.000	0.018	0.000
Mining and quarrying	002	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.005	0.710	0.710	0.000	0.000
Manufacturing	003	0.010	0.129	0.117	0.000	0.163	0.364	0.136	0.438	0.040	0.040	0.150	0.150
Electricity, gas, steam and air conditioning supply	004	0.051	0.027	0.033	0.000	0.029	0.039	0.023	0.026	0.004	0.004	0.018	0.018
Water supply; sewerage, waste management and remediation activities	005	0.002	0.001	0.000	0.000	0.001	0.001	0.003	0.002	0.000	0.000	0.001	0.001
Construction	006	0.005	0.000	0.001	0.000	0.003	0.007	0.003	0.001	0.000	0.000	0.001	0.001
Wholesale and retail trade and repair of motor vehicles	007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Transportation and storage	008	0.005	0.020	0.026	0.000	0.006	0.003	0.004	0.015	0.001	0.001	0.002	0.002
Accommodation and food service activities	009	0.001	0.027	0.031	0.000	0.002	0.003	0.004	0.005	0.000	0.000	0.002	0.002
Information and communication	010	0.001	0.035	0.008	0.000	0.006	0.003	0.046	0.012	0.000	0.000	0.004	0.004
Financial and insurance activities	011	0.116	0.052	0.082	0.000	0.016	0.017	0.048	0.030	0.006	0.006	0.049	0.049

		Real estate activities	Professional, scientific and technical activities	Administrative and support service activities	Public administration and defence; compulsory social security	Education	Human health activities	Arts, entertainment and recreation	Other service activities	Fuel combustion	Pipe line and gas distribution	Fertilizer	Waste
		012	013	014	015	016	017	018	019	020	021	022	023
Real estate activities	012	0.003	0.013	0.002	0.000	0.001	0.001	0.010	0.009	0.002	0.002	0.002	0.002
Professional, scientific and technical activities	013	0.000	0.029	0.000	0.000	0.000	0.004	0.003	0.006	0.000	0.000	0.000	0.000
Administrative and support service activities	014	0.000	0.000	0.004	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000
Public administration and defence; compulsory social security	015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Education	016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Human health activities	017	0.000	0.000	0.002	0.000	0.000	0.001	0.010	0.001	0.000	0.000	0.000	0.000
Arts, entertainment and recreation	018	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000
Other service activities	019	0.008	0.019	0.026	0.000	0.012	0.005	0.011	0.016	0.000	0.000	0.027	0.027
Fuel combustion	020	0.004	0.021	0.042	0.000	0.023	0.018	0.014	0.018	0.030	0.030	0.090	0.090
Pipe line and gas distribution	021	0.000	0.000	0.001	0.000	0.000	0.000	0.001	0.003	0.014	0.014	0.003	0.003
Fertilizer	022	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.034	0.000	0.000	0.000	0.000
Waste	023	0.005	0.001	0.002	0.000	0.003	0.003	0.005	0.001	0.000	0.000	0.002	0.002
Wages and salaries	201	0.094	0.428	0.381	0.743	0.602	0.332	0.163	0.155	0.016	0.016	0.479	0.479
Operating surpluses	202	0.254	0.130	0.170	0.000	0.082	0.109	0.290	0.129	0.020	0.020	0.093	0.093
Depreciations	203	0.412	0.060	0.059	0.257	0.053	0.048	0.088	0.056	0.022	0.022	0.056	0.056
Indirect taxes less subsidies	204	0.028	0.006	0.013	0.000	-0.018	0.015	0.114	0.021	0.133	0.133	0.022	0.022
Gross value added	209	0.788	0.625	0.622	1.000	0.718	0.504	0.655	0.361	0.191	0.191	0.649	0.649
	210	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Table A3. CIQ

Cross Industry Location Quotient (CLQ)

0301 - PHUKET		01	02	03	04	05	06	07	08	09	10	11
2015		Agriculture, forestry and fishing	Mining and quarrying	Manufacturing	Electricity, gas, steam and air conditioning supply	Water supply; sewerage, waste management and remediation activities	Construction	Wholesale and retail trade and repair of motor vehicles	Transportation and storage	Accommodation and food service activities	Information and communication	Financial and insurance activities
		0.30	0.00	0.06	0.63	0.59	1.15	0.38	3.66	9.50	0.46	0.70
Agriculture, forestry and fishing	0.30	0.30	-	5.40	0.47	0.50	0.26	0.79	0.08	0.03	0.64	0.42
Mining and quarrying	0.00	-	-	-	-	-	-	-	-	-	-	-
Manufacturing	0.06	0.19	-	0.06	0.09	0.09	0.05	0.15	0.02	0.01	0.12	0.08
Electricity, gas, steam and air conditioning supply	0.63	2.11	-	11.41	0.63	1.06	0.55	1.67	0.17	0.07	1.35	0.89
Water supply; sewerage, waste management and remediation activities	0.59	1.99	-	10.73	0.94	0.59	0.51	1.57	0.16	0.06	1.27	0.84
Construction	1.15	3.87	-	20.88	1.83	1.95	1.15	3.05	0.31	0.12	2.47	1.64
Wholesale and retail trade and repair of motor vehicles	0.38	1.27	-	6.84	0.60	0.64	0.33	0.38	0.10	0.04	0.81	0.54
Transportation and storage	3.66	12.32	-	66.52	5.83	6.20	3.19	9.72	3.66	0.39	7.88	5.21
Accommodation and food service activities	9.50	31.99	-	172.75	15.15	16.10	8.28	25.24	2.60	9.50	20.46	13.53
Information and communication	0.46	1.56	-	8.45	0.74	0.79	0.40	1.23	0.13	0.05	0.46	0.66
Financial and insurance activities	0.70	2.36	-	12.76	1.12	1.19	0.61	1.86	0.19	0.07	1.51	0.70
Real estate activities	1.07	3.60	-	19.44	1.70	1.81	0.93	2.84	0.29	0.11	2.30	1.52
Professional, scientific and technical activities	0.18	0.60	-	3.22	0.28	0.30	0.15	0.47	0.05	0.02	0.38	0.25
Administrative and support service activities	0.00	-	-	-	-	-	-	-	-	-	-	-
Public administration and defence; compulsory social security	0.56	1.87	-	10.10	0.89	0.94	0.48	1.48	0.15	0.06	1.20	0.79
Education	0.22	0.73	-	3.96	0.35	0.37	0.19	0.58	0.06	0.02	0.47	0.31
Human health activities	0.94	3.18	-	17.18	1.51	1.60	0.82	2.51	0.26	0.10	2.03	1.35
Arts, entertainment and recreation	1.11	3.75	-	20.25	1.78	1.89	0.97	2.96	0.30	0.12	2.40	1.59
Other service activities	0.43	1.46	-	7.87	0.69	0.73	0.38	1.15	0.12	0.05	0.93	0.62
Fuel combustion	0.06	0.19	-	1.00	0.09	0.09	0.05	0.15	0.02	0.01	0.12	0.08
Pipe line and gas distribution	0.63	2.11	-	11.41	1.00	1.06	0.55	1.67	0.17	0.07	1.35	0.89

0301 - PHUKET		01	02	03	04	05	06	07	08	09	10	11
2015		Agriculture, forestry and fishing	Mining and quarrying	Manufacturing	Electricity, gas, steam and air conditioning supply	Water supply; sewerage, waste management and remediation activities	Construction	Wholesale and retail trade and repair of motor vehicles	Transportation and storage	Accommodation and food service activities	Information and communication	Financial and insurance activities
		0.30	0.00	0.06	0.63	0.59	1.15	0.38	3.66	9.50	0.46	0.70
Fertilizer	0.06	0.19	-	1.00	0.09	0.09	0.05	0.15	0.02	0.01	0.12	0.08
Waste	0.59	1.99	-	10.73	0.94	1.00	0.51	1.57	0.16	0.06	1.27	0.84
Gross domestic product (GDP)	1.00	3.37	-	18.18	1.59	1.69	0.87	2.66	0.27	0.11	2.15	1.42

Table A3. CIQ (cont.)
Cross Industry Location Quotient (CLQ)

0301 - PHUKET	12	13	14	15	16	17	18	19	20	21	22	23	
2015	Real estate activities	Professional, scientific and technical activities	Administrative and support service activities	Public administration and defence; compulsory social security	Education	Human health activities	Arts, entertainment and recreation	Other service activities	Fuel combustion	Pipe line and gas distribution	Fertilizer	Waste	
	1.07	0.18	0.00	0.56	0.22	0.94	1.11	0.43	0.06	0.63	0.06	0.59	
Agriculture, forestry and fishing	0.30	0.28	1.68	-	0.53	1.36	0.31	0.27	0.69	5.40	0.47	5.40	0.50
Mining and quarrying	0.00	-	-	-	-	-	-	-	-	-	-	-	-
Manufacturing	0.06	0.05	0.31	-	0.10	0.25	0.06	0.05	0.13	1.00	0.09	1.00	0.09
Electricity, gas, steam and air conditioning supply	0.63	0.59	3.54	-	1.13	2.88	0.66	0.56	1.45	11.41	1.00	11.41	1.06
Water supply; sewerage, waste management and remediation activities	0.59	0.55	3.33	-	1.06	2.71	0.62	0.53	1.36	10.73	0.94	10.73	1.00
Construction	1.15	1.07	6.48	-	2.07	5.27	1.22	1.03	2.65	20.88	1.83	20.88	1.95
Wholesale and retail trade and repair of motor vehicles	0.38	0.35	2.13	-	0.68	1.73	0.40	0.34	0.87	6.84	0.60	6.84	0.64
Transportation and storage	3.66	3.42	20.65	-	6.58	16.80	3.87	3.29	8.46	66.52	5.83	66.52	6.20
Accommodation and food service activities	9.50	8.89	53.63	-	17.10	43.63	10.06	8.53	21.96	172.75	15.15	172.75	16.10
Information and communication	0.46	0.43	2.62	-	0.84	2.13	0.49	0.42	1.07	8.45	0.74	8.45	0.79
Financial and insurance activities	0.70	0.66	3.96	-	1.26	3.22	0.74	0.63	1.62	12.76	1.12	12.76	1.19
Real estate activities	1.07	1.07	6.04	-	1.92	4.91	1.13	0.96	2.47	19.44	1.70	19.44	1.81

0301 - PHUKET	12	13	14	15	16	17	18	19	20	21	22	23	
2015	Real estate activities	Professional, scientific and technical activities	Administrative and support service activities	Public administration and defence; compulsory social security	Education	Human health activities	Arts, entertainment and recreation	Other service activities	Fuel combustion	Pipe line and gas distribution	Fertilizer	Waste	
	1.07	0.18	0.00	0.56	0.22	0.94	1.11	0.43	0.06	0.63	0.06	0.59	
Professional, scientific and technical activities	0.18	0.17	0.18	-	0.32	0.81	0.19	0.16	0.41	3.22	0.28	3.22	0.30
Administrative and support service activities	0.00	-	-	-	-	-	-	-	-	-	-	-	-
Public administration and defence; compulsory social security	0.56	0.52	3.14	-	0.56	2.55	0.59	0.50	1.28	10.10	0.89	10.10	0.94
Education	0.22	0.20	1.23	-	0.39	0.22	0.23	0.20	0.50	3.96	0.35	3.96	0.37
Human health activities	0.94	0.88	5.33	-	1.70	4.34	0.94	0.85	2.18	17.18	1.51	17.18	1.60
Arts, entertainment and recreation	1.11	1.04	6.29	-	2.00	5.11	1.18	1.11	2.57	20.25	1.78	20.25	1.89
Other service activities	0.43	0.40	2.44	-	0.78	1.99	0.46	0.39	0.43	7.87	0.69	7.87	0.73
Fuel combustion	0.06	0.05	0.31	-	0.10	0.25	0.06	0.05	0.13	0.06	0.09	1.00	0.09
Pipe line and gas distribution	0.63	0.59	3.54	-	1.13	2.88	0.66	0.56	1.45	11.41	0.63	11.41	1.06
Fertilizer	0.06	0.05	0.31	-	0.10	0.25	0.06	0.05	0.13	1.00	0.09	0.06	0.09
Waste	0.59	0.55	3.33	-	1.06	2.71	0.62	0.53	1.36	10.73	0.94	10.73	0.59
Gross domestic product (GDP)	1.00	0.94	5.64	-	1.80	4.59	1.06	0.90	2.31	18.18	1.59	18.18	1.69

Table A4. Matrix A of Phuket
Intermediate input and value added coefficient (A_{ij} and V_{ij})

		Agriculture, forestry and fishing	Mining and quarrying	Manufacturing	Electricity, gas, steam and air conditioning supply	Water supply; sewerage, waste management and remediation activities	Construction	Wholesale and retail trade and repair of motor vehicles	Transportation and storage	Accommodation and food service activities	Information and communication	Financial and insurance activities
		001	002	003	004	005	006	007	008	009	010	011
Agriculture, forestry and fishing	001	0.0307	-	0.0957	0.0003	-	0.0014	0.0000	0.0001	0.0044	0.0000	0.0010
Mining and quarrying	002	-	-	-	-	-	-	-	-	-	-	-
Manufacturing	003	0.0212	-	0.0378	0.0036	0.0056	0.0251	0.0067	0.0028	0.0021	0.0078	0.0101
Electricity, gas, steam and air conditioning supply	004	0.0032	-	0.0233	0.0260	0.1258	0.0033	0.0202	0.0021	0.0054	0.0343	0.0120
Water supply; sewerage, waste management and remediation activities	005	0.0003	-	0.0010	0.0001	0.0281	0.0002	0.0012	0.0002	0.0003	0.0014	0.0013
Construction	006	0.0007	-	0.0010	0.0014	0.0003	0.0010	0.0005	0.0003	0.0005	0.0020	0.0067

		Agriculture, forestry and fishing	Mining and quarrying	Manufacturing	Electricity, gas, steam and air conditioning supply	Water supply; sewerage, waste management and remediation activities	Construction	Wholesale and retail trade and repair of motor vehicles	Transportation and storage	Accommodation and food service activities	Information and communication	Financial and insurance activities
		001	002	003	004	005	006	007	008	009	010	011
Wholesale and retail trade and repair of motor vehicles	007	-	-	-	-	-	-	-	-	-	-	-
Transportation and storage	008	0.0023	-	0.0062	0.0018	0.0013	0.0375	0.0179	0.0950	0.0009	0.0214	0.0106
Accommodation and food service activities	009	0.0019	-	0.0016	0.0013	0.0007	0.0053	0.0217	0.0097	0.0024	0.0042	0.0112
Information and communication	010	0.0012	-	0.0028	0.0013	0.0007	0.0004	0.0095	0.0009	0.0007	0.1048	0.0616
Financial and insurance activities	011	0.0234	-	0.0222	0.0430	0.0835	0.0183	0.0608	0.0137	0.0033	0.0846	0.0839
Real estate activities	012	0.0003	-	0.0012	0.0001	0.0001	0.0010	0.0032	0.0012	0.0005	0.0045	0.0191
Professional, scientific and technical activities	013	0.0000	-	0.0003	0.0001	0.0000	0.0000	-	0.0000	-	0.0000	0.0001
Administrative and support service activities	014	-	-	-	-	-	-	-	-	-	-	-
Public administration and defence; compulsory social security	015	-	-	-	-	-	-	-	-	-	-	-
Education	016	-	-	-	-	-	-	-	-	-	-	-
Human health activities	017	0.0000	-	0.0001	0.0004	0.0000	0.0003	0.0001	0.0002	0.0000	0.0011	0.0010
Arts, entertainment and recreation	018	-	-	0.0000	-	-	-	-	0.0000	0.0003	0.0016	0.0036
Other service activities	019	0.0014	-	0.0047	0.0017	0.0039	0.0007	0.0103	0.0007	0.0001	0.0163	0.0073
Fuel combustion	020	0.0078	-	0.0178	0.0083	0.0003	0.0010	0.0017	0.0063	0.0001	0.0011	0.0016
Pipe line and gas distribution	021	0.0001	-	0.0035	0.1972	-	0.0002	0.0000	0.0004	0.0007	0.0000	0.0011
Fertilizer	022	0.0218	-	0.0000	-	-	0.0000	-	-	0.0000	-	0.0001
Waste	023	0.0000	-	0.0006	0.0001	0.0061	0.0004	0.0001	0.0002	0.0003	0.0027	0.0026

Table A4. Matrix A of Phuket (cont.)

Intermediate input and value added coefficient (A_{ij} and V_{ij})

		Real estate activities	Professional, scientific and technical activities	Administrative and support service activities	Public administration and defence; compulsory social security	Education	Human health activities	Arts, entertainment and recreation	Other service activities	Fuel combustion	Pipe line and gas distribution	Fertilizer	Waste
		012	013	014	015	016	017	018	019	020	021	022	023
Agriculture, forestry and fishing	001	0.0007	0.0025	-	-	0.0131	0.0097	0.0064	0.0056	0.0000	-	0.0352	-
Mining and quarrying	002	-	-	-	-	-	-	-	-	-	-	-	-
Manufacturing	003	0.0006	0.0640	-	-	0.0423	0.0194	0.0093	0.0178	0.0338	0.0010	0.4408	0.0123
Electricity, gas, steam and air conditioning supply	004	0.0372	0.0270	-	-	0.0292	0.0268	0.0180	0.0097	0.0026	0.0089	0.0096	0.0246

		Real estate activities	Professional, scientific and technical activities	Administrative and support service activities	Public administration and defence; compulsory social security	Education	Human health activities	Arts, entertainment and recreation	Other service activities	Fuel combustion	Pipe line and gas distribution	Fertilizer	Waste
		012	013	014	015	016	017	018	019	020	021	022	023
Water supply; sewerage, waste management and remediation activities	005	0.0041	0.0008	-	-	0.0010	0.0013	0.0043	0.0004	0.0001	0.0007	0.0024	0.0013
Construction	006	0.0072	0.0009	-	-	0.0037	0.0099	0.0042	0.0011	0.0000	0.0007	0.0017	0.0067
Wholesale and retail trade and repair of motor vehicles	007	-	-	-	-	-	-	-	-	-	-	-	-
Transportation and storage	008	0.0029	0.0116	-	-	0.0060	0.0067	0.0040	0.0198	0.0006	0.0021	0.0165	0.0019
Accommodation and food service activities	009	0.0017	0.0069	-	-	0.0065	0.0065	0.0019	0.0056	0.0002	0.0027	0.0042	0.0078
Information and communication	010	0.0006	0.0443	-	-	0.0052	0.0016	0.0294	0.0050	0.0010	0.0016	0.0062	0.0036
Financial and insurance activities	011	0.0915	0.0264	-	-	0.0166	0.0123	0.0250	0.0116	0.0039	0.0367	0.0475	0.0469
Real estate activities	012	0.0026	0.0035	-	-	0.0010	0.0004	0.0096	0.0053	0.0001	0.0012	0.0018	0.0020
Professional, scientific and technical activities	013	0.0000	0.0013	-	-	0.0002	0.0002	0.0001	0.0002	0.0001	0.0000	0.0007	0.0000
Administrative and support service activities	014	-	-	-	-	-	-	-	-	-	-	-	-
Public administration and defence; compulsory social security	015	-	-	-	-	-	-	-	-	-	-	-	-
Education	016	-	-	-	-	-	-	-	-	-	-	-	-
Human health activities	017	0.0000	0.0035	-	-	0.0002	0.0022	0.0091	0.0010	0.0000	0.0000	0.0001	0.0000
Arts, entertainment and recreation	018	0.0000	-	-	-	0.0000	0.0002	0.0042	0.0000	-	-	-	-
Other service activities	019	0.0014	0.0148	-	-	0.0086	0.0021	0.0046	0.0046	0.0003	0.0036	0.0013	0.0134
Fuel combustion	020	0.0003	0.0114	-	-	0.0074	0.0013	0.0009	0.0007	0.0036	0.0003	0.0134	0.0090
Pipe line and gas distribution	021	0.0000	0.0001	-	-	0.0003	0.0015	0.0010	0.0013	0.0012	0.1091	0.0036	0.0033
Fertilizer	022	0.0000	-	-	-	-	-	0.0001	0.0015	-	-	0.0094	0.0000
Waste	023	0.0060	0.0009	-	-	0.0032	0.0023	0.0049	0.0004	0.0001	0.0023	0.0003	0.0018

Table A5. Defensive cost

Sub-district	List of defensive cost	Activity	Expense
	Maikhao	Garbage and fences collection	3,000
		Waste disposal	500,000
	Cherng Talay	Construction for wastewater collection and treatment project	23,551,940
	Si Sunthon	Construction of Reinforced Concrete Drainage Pipes with Manholes in Baan Bor Rae Soi, Moo 8, Si Sunthon Subdistrict	550,000
		Waste and sewage disposal work	25,395,000
		Waste recycling project, amount	20,000
		Project to purchase garbage bins	100,000
		Project to hire a private contractor to collect waste	4,700,000
	Kamala	Waste disposal	7,905,920
		Waste treatment	50,000
	Phuket City Municipality		43,560,530
			910,000
			300,000
			3,000,000
Regional Environmental Office	Solid waste treatment	61,000,000	
	Management	13,971,200	
Annual costs	Phuket City Municipality	43,560,530	
	Patong	23,124,209	
	Kathu	6,304,680	
	Karon	14,624,441	
	Cherng Talay	7,110,400	
Other			
	Natural Resource Management	Provincial managements and monitoring	15,885,000
	Office of The Permanent Secretary for Ministry of Natural Resources and Environment		4297402
	Pollution control department		69,985
	Department of Environmental Quality Promotion.		307260.65
	Office of Natural Resources and Environmental Policy and Planning (ONEP)		345,836
	Department of Groundwater Resources		914,616
	Royal Forest Department		11,000
	Phuket Provincial Administrative Organization		8,025,100
Total			310,098,050