

Chapter 14

Annexes





Annex 1

A. Classification of EEE under the ten categories (EU-10) set out in Annex I to the WEEE Directive 2012/19/EU¹⁵

EU-10	Full name
1	Large household appliances
2	Small household appliances
3	IT and telecommunications equipment
4	Consumer equipment and photovoltaic panels
5	Lighting equipment
6	Electrical and electronic tools
7	Toys, leisure, and sports equipment
8	Medical devices
9	Monitoring and control instruments
10	Automatic dispensers

B. Classification of EEE under the six categories (EU-6) set out in Annex III to the WEEE Directive 2012/19/EU

EU-10	Full name
1	Temperature exchange equipment
2	Screens, monitors, and equipment containing screens (..)
3	Lamps
4	Large equipment
5	Small equipment
6	Small IT and telecommunication equipment

C. Classification of EEE under the UNU-KEYs and correlation of UNU-KEYs with the categories under EU-10 and EU-6 classification

UNU-KEY	Description	EEE category under EU-10	EEE category under EU-6
0001	Central Heating (household installed)	1	4
0002	Photovoltaic Panels (incl. inverters)	4	4
0101	Professional Heating & Ventilation (excl. cooling equipment)	1	4
0102	Dish washers	1	4
0103	Kitchen equipment (e.g. large furnaces, ovens, cooking equipment)	1	4
0104	Washing Machines (incl. combined dryers)	1	4
0105	Dryers (wash dryers, centrifuges)	1	4
0106	Household Heating & Ventilation (e.g. hoods, ventilators, space heaters)	1	4
0108	Fridges (incl. combi-fridges)	1	1
0109	Freezers	1	1
0111	Air Conditioners (household installed and portable)	1	1
0112	Other Cooling equipment (e.g. dehumidifiers, heat pump dryers)	1	1
0113	Professional Cooling equipment (e.g. large air conditioners, cooling displays)	1	1
0114	Microwaves (incl. combined, excl. grills)	1	5
0201	Other small household equipment (e.g. small ventilators, irons, clocks, adapters)	2	5
0202	Equipment for food preparation(e.g. toaster, grills, food processing, frying pans)	2	5
0203	Small household equipment for hot water preparation (e.g. coffee, tea, water cookers)	2	5
0204	Vacuum Cleaners (excl. professional)	2	5
0205	Personal Care equipment(e.g. tooth brushes, hair dryers, razors)	2	5
0301	Small IT equipment (e.g. routers, mice, keyboards, external drives, and accessories)	3	6
0302	Desktop PCs (excl. monitors, accessoires)	3	6
0303	Laptops (incl. tablets)	3	2

UNU-KEY	Description	EEE category under EU-10	EEE category under EU-6
0304	Printers (e.g. scanners, multi functionals, faxes)	3	6
0305	Telecommunication equipment (e.g. (cordless) phones, answering machines)	3	6
0306	Mobile Phones (incl. smartphones, pagers)	3	6
0307	Professional IT equipment (e.g. servers, routers, data storage, copiers)	3	4
0308	Cathode Ray Tube Monitors	3	2
0309	Flat Display Panel Monitors (LCD, LED)	3	2
0401	Small Consumer Electronics (e.g. headphones, remote controls)	4	5
0402	Portable Audio & Video (e.g. MP3, e-readers, car navigation)	4	5
0403	Music Instruments, Radio, Hi-Fi (incl. audio sets)	4	5
0404	Video (e.g. Video recorders, DVD, Blue Ray, set-top boxes) and projectors	4	5
0405	Speakers	4	5
0406	Cameras (e.g. camcorders, photo, and digital still cameras)	4	5
0407	Cathode Ray Tube TVs	4	2
0408	Flat Display Panel TVs (LCD, LED, Plasma)	4	2
0501	Small lighting equipment (excl. LED and incandescent)	5	5
0502	Compact Fluorescent Lamps (incl. retrofit and non-retrofit)	5	3
0503	Straight Tube Fluorescent Lamps	5	3
0504	Special Lamps (e.g. professional mercury, high & low pressure sodium)	5	3
0505	LED Lamps (incl. retrofit LED lamps)	5	3
0506	Household Luminaires (incl. household incandescent fittings, and household LED luminaires)	5	5
0507	Professional Luminaires (offices, public space, industry)	5	5
0601	Household Tools (e.g. drills, saws, high pressure cleaners, lawn mowers)	6	5
0602	Professional Tools (e.g. for welding, soldering, milling)	6	4

UNU-KEY	Description	EEE category under EU-10	EEE category under EU-6
0701	Toys (e.g. car racing sets, electric trains, music toys, biking computers, drones)	7	5
0702	Game Consoles	7	6
0703	Leisure equipment (e.g. sports equipment, electric bikes, juke boxes)	7	4
0801	Household Medical equipment(e.g. thermometers, blood pressure meters)	8	5
0802	Professional Medical equipment (e.g. hospital, dentist, diagnostics)	8	4
0901	Household Monitoring & Control equipment (alarm, heat, smoke, excl. screens)	9	5
0902	Professional Monitoring & Control equipment (e.g. laboratory, control panels)	9	4
1001	Non- cooled Dispensers (e.g. for vending, hot drinks, tickets, money)	10	4
1002	Cooled Dispensers (e.g. for vending, cold drinks)	10	1

Annex 2

E-waste Collection Data From Official Take-Back Systems

Data in kilotons (kt). The scope of the products that are collected and recycled do usually reflect the scope of the national legislation, and do not always match the scope of the products in Annex 3, except for data from Eurostat.

Region	Country / Economy	Year	Collection (kt)	Source
Africa	Mauritius	2011	2	Africa Institute 2012
Americas	Argentina	2013	11	Telecom Argentina
Americas	Canada	2014	148	Kumar et al., 2016
Americas	Chile	2012	0.7	Reporte de Sustentabilidad Bienal 2011-2012
Americas	El Salvador	2012	0.6	MINED
Americas	Honduras	2015	0.2	Rush Martínez et. al, 2014
Americas	Saint Lucia	2015	0.03	Roldan, 2017
Americas	United States of America	2014	1400	US EPA
Asia	China	2013	1290	China Ministry of environment
Asia	Hong Kong, Special Administrative Region of China	2013	56	Hong Kong EPD
Asia	Cyprus	2014	2.3	Eurostat
Asia	Taiwan, Province of China	2015	127	EPA Taiwan
Asia	Turkey	2015	125	EXITCOM
Europe	Austria	2015	80	Eurostat
Europe	Belgium	2015	118	Eurostat
Europe	Bulgaria	2015	62	Eurostat
Europe	Croatia	2015	24	Eurostat
Europe	Czech Republic	2015	74	Eurostat
Europe	Denmark	2015	72	Eurostat
Europe	Estonia	2015	5.7	Eurostat
Europe	Finland	2015	62	Eurostat

Region	Country / Economy	Year	Collection (kt)	Source
Europe	France	2015	596	Eurostat
Europe	Germany	2015	631	Eurostat
Europe	Greece	2015	49	Eurostat
Europe	Hungary	2015	52	Eurostat
Europe	Iceland	2014	3.4	Eurostat
Europe	Ireland	2015	49	Eurostat
Europe	Italy	2015	249	Eurostat
Europe	Latvia	2015	5.0	Eurostat
Europe	Lithuania	2015	16	Eurostat
Europe	Luxembourg	2015	5.8	Eurostat
Europe	Malta	2014	1.7	Eurostat
Europe	Netherlands	2015	145	Eurostat
Europe	Norway	2015	106	Eurostat
Europe	Poland	2015	199	Eurostat
Europe	Portugal	2015	65	Eurostat
Europe	Romania	2014	32	Eurostat
Europe	Russian Federation	2014	90	Analytical Center for the Government of Russian Federation
Europe	Serbia	2015	13	IENE
Europe	Slovakia	2015	23	Eurostat
Europe	Slovenia	2015	11	Eurostat
Europe	Spain	2015	198	Eurostat
Europe	Sweden	2015	145	Eurostat
Europe	Switzerland	2015	134	WEEE Forum
Europe	United Kingdom of Great Britain and Northern Ireland	2015	663	Eurostat
Oceania	Australia	2014	43	Australian Ministry of Environment
Total from questionnaires		2014 /2015	1063	UNSD, OECD, UNECE

Annex 3

Domestic E-waste Generated Per Country in 2016

The amounts of e-waste generated are the sum of the six e-waste categories: Temperature Exchange Equipment, Screens, Monitors, Lamps. Large equipment, Small equipment, Small IT and telecommunication equipment.

Country / Economy	Region	Population (1000)	E-waste generated in 2016 (kg/inh)	E-waste generated in 2016 (kt)	National regulation in force in January 2017
Afghanistan	Asia	32739	0.6	20	no
Albania	Europe	2885	7.1	20	yes
Algeria	Africa	40762	6.2	252	no
Angola	Africa	27360	3.3	92	no
Antigua and Barbuda	Africa	90	12.0	1.1	no
Argentina	Americas	43600	8.4	368	no
Armenia	Asia	2991	4.7	14	no
Australia	Oceania	24357	23.6	574	yes
Austria	Europe	8691	20.9	182	yes
Azerbaijan	Asia	9492	6.7	63	no
Bahamas	Americas	368	13.2	4.9	no
Bahrain	Asia	1319	15.5	20	no
Bangladesh	Asia	161513	0.9	142	no
Barbados	Americas	280	13.7	3.8	no
Belarus	Europe	9451	7.6	72	no
Belgium	Europe	11332	21.2	241	yes
Belize	Americas	377	6.0	2.3	no
Benin	Africa	11128	0.7	8.2	no
Bhutan	Asia	791	2.5	2.0	yes
Bolivia (Plurinational State of)	Americas	10896	3.3	36	yes
Bosnia and Herzegovina	Europe	3854	6.5	25	yes
Botswana	Africa	2154	7.6	16	no

Country / Economy	Region	Population (1000)	E-waste generated in 2016 (kg/inh)	E-waste generated in 2016 (kt)	National regulation in force in January 2017
Brazil	Americas	206090	7.4	1534	no
Brunei Darussalam	Asia	423	18.3	7.7	no
Bulgaria	Europe	7114	11.1	79	yes
Burkina Faso	Africa	18420	0.6	11	no
Burundi	Africa	9648	0.5	5.0	no
Cambodia	Asia	15776	0.9	14	yes
Cameroon	Africa	23685	0.8	19	yes
Canada	Americas	36209	20.0	724	yes
Cape Verde	Africa	531	4.6	2.4	no
Central African Republic	Africa	4888	0.5	2.7	no
Chad	Africa	11855	0.7	8.8	no
Chile	Americas	18196	8.7	159	yes
China	Asia	1378984	5.2	7211	yes
Hong Kong, Special Administrative Region of China	Asia	7357	19.0	140	yes
Macao, Special Administrative Region of China	Asia	658	16.6	11	yes
Colombia	Americas	48750	5.6	275	yes
Comoros	Africa	823	0.8	0.6	no
Congo	Africa	4460	3.0	13	no
Costa Rica	Americas	4910	9.7	48	yes
Côte d'Ivoire	Africa	24327	0.9	22	no
Croatia	Europe	4204	12.6	53	yes
Cyprus	Asia	851	19.1	16	yes
Czech Republic	Europe	10561	15.9	168	yes
Denmark	Europe	5683	24.8	141	yes
Djibouti	Africa	993	0.9	0.9	no
Dominica	Americas	71	7.7	0.5	no

Country / Economy	Region	Population (1000)	E-waste generated in 2016 (kg/inh)	E-waste generated in 2016 (kt)	National regulation in force in January 2017
Dominican Republic	Americas	10088	5.8	59	no
Ecuador	Americas	16529	5.5	90	yes
Egypt	Africa	91047	5.5	497	no
El Salvador	Americas	6146	5.8	36	no
Eritrea	Africa	6938	0.6	3.8	no
Estonia	Europe	1312	14.4	19	yes
Ethiopia	Africa	91196	0.5	49	no
Fiji	Oceania	895	5.1	4.6	no
Finland	Europe	5500	21.1	116	yes
France	Europe	64569	21.3	1373	yes
Gabon	Africa	1881	7.6	14	no
Gambia	Africa	2035	1.1	2.2	no
Georgia	Asia	3701	5.7	21	no
Germany	Europe	82571	22.8	1884	yes
Ghana	Africa	27573	1.4	39	no
Greece	Europe	10835	17.5	189	yes
Grenada	Americas	107	7.8	0.8	no
Guatemala	Americas	16673	4.0	67	no
Guinea	Africa	12654	0.6	8.0	no
Guinea-Bissau	Africa	1818	0.5	1.0	no
Guyana	Americas	769	6.1	4.7	no
Honduras	Americas	8203	2.3	19	no
Hungary	Europe	9835	13.8	136	yes
Iceland	Europe	336	22.6	7.6	yes
India	Asia	1309713	1.5	1975	yes
Indonesia	Asia	258802	4.9	1274	no
Iran (Islamic Republic of)	Asia	80460	7.8	630	no
Iraq	Asia	36067	6.1	221	no

Country / Economy	Region	Population (1000)	E-waste generated in 2016 (kg/inh)	E-waste generated in 2016 (kt)	National regulation in force in January 2017
Ireland	Europe	4675	19.9	93	yes
Israel	Asia	8528	14.1	120	yes
Italy	Europe	61151	18.9	1156	yes
Jamaica	Americas	2829	5.9	17	no
Japan	Asia	126804	16.9	2139	yes
Jordan	Asia	7748	5.6	43	no
Kazakhstan	Asia	17947	8.2	147	no
Kenya	Africa	45451	0.8	38	yes
Kiribati	Oceania	116	0.8	0.1	no
Kuwait	Asia	4225	15.8	67	no
Kyrgyzstan	Asia	6059	1.2	7.2	no
Lao People's Democratic Republic	Asia	7163	1.0	7.5	no
Latvia	Europe	1976	11.0	22	yes
Lebanon	Asia	4597	11.1	51	no
Lesotho	Africa	1937	0.9	1.8	no
Libya	Africa	6385	11.0	70	no
Lithuania	Europe	2871	13.4	38	yes
Luxembourg	Europe	576	20.9	12	yes
Madagascar	Africa	24916	0.5	14	yes
Malawi	Africa	18632	0.5	9.5	no
Malaysia	Asia	31716	8.8	280	no
Maldives	Asia	354	6.9	2.5	no
Mali	Africa	16817	0.7	12	no
Malta	Europe	431	15.5	6.7	yes
Mauritania	Africa	3794	1.3	5.1	no
Mauritius	Africa	1259	8.6	11	no
Mexico	Americas	122273	8.2	998	yes

Country / Economy	Region	Population (1000)	E-waste generated in 2016 (kg/inh)	E-waste generated in 2016 (kt)	National regulation in force in January 2017
Micronesia (Federated States of)	Oceania	103	1.7	0.2	no
Mongolia	Asia	3014	4.7	14	no
Montenegro	Europe	623	10.0	6.2	yes
Morocco	Africa	33827	3.7	127	no
Mozambique	Africa	28751	0.6	17	no
Myanmar	Asia	52254	1.0	55	no
Namibia	Africa	2300	6.0	14	no
Nepal	Asia	28834	0.8	23	no
Netherlands	Europe	17030	23.9	407	yes
New Zealand	Oceania	4712	20.1	95	no
Nicaragua	Americas	6342	2.2	14	no
Niger	Africa	18194	0.4	7.9	no
Nigeria	Africa	183636	1.5	277	yes
Norway	Europe	5263	28.5	150	yes
Oman	Asia	3957	14.9	59	no
Pakistan	Asia	192996	1.6	301	no
Palau	Oceania	18	9.3	0.2	no
Panama	Americas	4086	8.0	33	no
Papua New Guinea	Oceania	7911	0.9	7.0	no
Paraguay	Americas	6855	6.4	44	no
Peru	Americas	31481	5.8	182	yes
Philippines	Asia	104195	2.8	290	no
Poland	Europe	37967	11.9	453	yes
Portugal	Europe	10419	17.3	180	yes
Qatar	Asia	2578	11.3	29	no
Republic of Korea	Asia	50823	13.1	665	yes
Republic of Moldova	Europe	3553	1.8	6.3	no

Country / Economy	Region	Population (1000)	E-waste generated in 2016 (kg/inh)	E-waste generated in 2016 (kt)	National regulation in force in January 2017
Romania	Europe	19760	11.6	229	yes
Russian Federation	Europe	143440	9.7	1392	yes
Rwanda	Africa	11530	0.5	5.9	no
Saint Kitts and Nevis	Americas	56	12.1	0.7	no
Saint Lucia	Americas	174	9.3	1.6	no
Saint Vincent and the Grenadines	Americas	110	8.3	0.9	no
Samoa	Oceania	195	2.6	0.5	no
Sao Tome and Principe	Africa	208	1.2	0.2	no
Saudi Arabia	Asia	32013	15.9	508	no
Senegal	Africa	15406	1.0	15	no
Serbia	Europe	7132	7.1	51	yes
Seychelles	Africa	93	11.5	1.1	no
Sierra Leone	Africa	6439	0.5	3.4	no
Singapore	Asia	5591	17.9	100	no
Slovakia	Europe	5422	12.3	67	yes
Slovenia	Europe	2065	16.1	33	yes
Solomon Islands	Oceania	601	0.7	0.4	no
South Africa	Africa	55870	5.7	321	no
Spain	Europe	46356	20.1	930	yes
Sri Lanka	Asia	21252	4.5	95	no
Sudan	Africa	39599	1.3	51	no
Suriname	Americas	563	9.6	5.4	no
Swaziland	Africa	1132	5.1	5.7	no
Sweden	Europe	10027	21.5	215	yes
Switzerland	Europe	8325	22.2	184	yes
Thailand	Asia	68981	7.4	507	no
The former Yugoslav Republic of Macedonia	Europe	2073	7.2	15	yes

Country / Economy	Region	Population (1000)	E-waste generated in 2016 (kg/inh)	E-waste generated in 2016 (kt)	National regulation in force in January 2017
Timor-Leste	Asia	1188	3.0	3.6	no
Togo	Africa	7509	0.9	6.4	no
Tonga	Oceania	105	2.4	0.3	no
Trinidad and Tobago	Americas	1364	15.8	22	no
Tunisia	Africa	11224	5.6	63	no
Turkey	Asia	78967	7.9	623	yes
Tuvalu	Oceania	11	1.2	0.01	no
Uganda	Africa	41087	0.6	25	yes
Ukraine	Europe	42501	6.5	277	yes
United Arab Emirates	Asia	9856	13.6	134	no
United Kingdom of Great Britain and Northern Ireland	Europe	65572	24.9	1632	yes
United Republic of Tanzania	Africa	48633	0.8	38	no
United States of America	Americas	323978	19.4	6295	yes
Uruguay	Americas	3427	10.8	37	no
Vanuatu	Oceania	275	1.0	0.3	no
Venezuela (Bolivarian Republic of)	Americas	31029	8.2	254	no
Viet Nam	Asia	92637	1.5	141	yes
Yemen	Asia	29132	1.5	42	no
Zambia	Africa	16717	0.9	15	no
Zimbabwe	Africa	14501	0.9	13	no

