

## Fiscal 2016 Environmental data sheet

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# Report Policy

## Boundary

TOTO LTD. and 52 of consolidated subsidiary companies in Japan and overseas.

However, with respect to data for which the boundary of calculation is different, notes are described individually.

## Period covered by this report

Fiscal year 2016 (Japan: April 1, 2016 to March 31, 2017/ Overseas: January 1, 2016 to December 31, 2016.)

## Independent Assurance

The fiscal year 2016 performance indicators with this tick mark have been assured by KPMG AZSA Sustainability Co., Ltd.

But “per unit of sales” of each indicators are not covered.

## Referenced guidelines

“Environmental Reporting Guidelines (Year 2012 version)”, Ministry of the Environment of Japan

## Environmental Performance Indicator

### GHG Emissions

(Fiscal year)

Indicators	Unit	2012	2013	2014	2015	2016
<input checked="" type="checkbox"/> Scope 1	thousand tons CO <sub>2</sub>	159	167	171	168	173
(per unit of sales)	tons CO <sub>2</sub> /million yen	0.33	0.30	0.31	0.30	0.30
<input checked="" type="checkbox"/> Scope 2	thousand tons CO <sub>2</sub>	140	149	156	157	161
(per unit of sales)	tons CO <sub>2</sub> / million yen	0.29	0.27	0.29	0.28	0.28

(Fiscal year)

Indicators	Unit	2015	2016
<input checked="" type="checkbox"/> Scope 3 Category 11 (Use of Sold Products)	thousand tons CO <sub>2</sub>	18,148	18,789

### Energy Consumption

(Fiscal year)

Indicators	Unit	2012	2013	2014	2015	2016
<input checked="" type="checkbox"/> Energy consumption	PJ	5.5	5.8	6.0	6.0	6.2
(per unit of sales)	GJ/million yen	11.5	10.5	11.0	10.5	10.8
<input checked="" type="checkbox"/> Purchased electricity	GWh	277	292	301	302	304
(per unit of sales)	MWh/ million yen	0.58	0.53	0.55	0.53	0.53
Renewable energy generation	MWh	202	217	198	215	185

## Water Consumption and Wastewater

(Fiscal year)

Indicators	Unit	2 0 1 2	2 0 1 3	2 0 1 4	2 0 1 5	2 0 1 6
<input checked="" type="checkbox"/> Water consumption	thousand m <sup>3</sup>	2,702	2,601	2,800	2,851	2,866
(per unit of sales)	m <sup>3</sup> / million yen	5.67	4.70	5.14	5.02	4.99
(Groundwater consumption)	thousand m <sup>3</sup>	496	462	451	432	435
Wastewater	thousand m <sup>3</sup>	2,272	1,824	1,809	1,801	1,832
(per unit of sales)	m <sup>3</sup> / million yen	4.77	3.30	3.32	3.17	3.19
Reused water	thousand m <sup>3</sup>	1,266	1,416	1,893	1,711	1,728

※The amount of groundwater consumption has been corrected as far back as fiscal 2012 for the improvement of accuracy

## Waste

(Fiscal year)

Indicators	Unit	2 0 1 2	2 0 1 3	2 0 1 4	2 0 1 5	2 0 1 6
Waste generated	thousand tons	104.3	99.0	103.7	106.7	108.3
(per unit of sales)	tons/million yen	219.0	178.9	190.4	187.9	188.7
Final disposal	thousand tons	27.6	21.3	17.2	8.7	5.2
(per unit of sales)	tons/million yen	57.9	38.5	31.6	15.3	9.1
Recycling rate	%	73.5	80.6	82.4	91.8	95.2
(Japan)	%	99.9	99.9	99.9	100	100
(Overseas)	%	58.1	69.7	74.4	88.1	93.0
(Paper and Cardboard in TOTO branch and sales offices )	%	99.3	99.3	99.7	99.8	99.9
(Paper and Cardboard in Group Sale/ Construction companies in Japan)	%	99.9	100	100	100	99.9

## Atmospheric Emissions

(Fiscal year)

Indicators	Unit	2 0 1 2	2 0 1 3	2 0 1 4	2 0 1 5	2 0 1 6
Chemical substance emission	tons	39.7	27.9	28.0	40.0	32.4
(per unit of sales)	kg/ million yen	0.08	0.05	0.05	0.07	0.06
SOx emission	tons	168.1	149.8	131.5	134.4	55.3
(per unit of sales)	kg/ million yen	0.35	0.27	0.24	0.24	0.10
NOx emission	tons	283.2	356.1	382.6	272.9	353.7
(per unit of sales)	kg/ million yen	0.59	0.64	0.70	0.48	0.62
Dust emission	tons	150.6	110.8	152.3	133.4	285.5
(per unit of sales)	kg/ million yen	0.32	0.20	0.28	0.22	0.50

※The amount of Dust emission for fiscal 2015 has been corrected for the improvement of accuracy

## Regulated total water pollutants performance

COD (Chemical Oxygen Demand)

(Fiscal year)

Plants	Unit	Regulatory value	Actual measured value				
			2012	2013	2014	2015	2016
Kokura No.2 Plant, TOTO LTD.	kg/day	28.82	6.60	9.59	9.61	5.02	4.16
HQ / Nakatsu Plant, TOTO SANITECHNO LTD.	kg/day	12.00	4.10	2.90	3.20	4.40	2.40
HQ / Nakatsu Plant, TOTO Fine Ceramics LTD.	kg/day	4.70	2.35	0.28	0.22	0.31	0.19
Oita Plant, TOTO AQUATECHNO LTD.	kg/day	16.60	4.60	1.90	2.60	2.40	2.20
Aichi Plant, TOTO SANITECHNO LTD.	kg/day	4.30	—	—	0.70	0.63	0.71

## Nitrogen content

(Fiscal year)

Plants	Unit	Regulatory value	Actual measured value				
			2012	2013	2014	2015	2016
Kokura No.2 Plant, TOTO LTD.	kg/day	57.48	1.69	2.04	2.50	2.09	2.47
HQ / Nakatsu Plant, TOTO SANITECHNO LTD.	kg/day	8.85	6.95	6.42	5.51	4.66	5.91
HQ / Nakatsu Plant, TOTO Fine Ceramics LTD.	kg/day	8.20	0.93	1.44	0.92	1.10	0.93
Oita Plant, TOTO AQUATECHNO LTD.	kg/day	16.60	2.85	2.40	2.60	2.30	1.00
Aichi Plant, TOTO SANITECHNO LTD.	kg/day	3.70	—	—	0.06	0.25	0.23

## Phosphorus content

(Fiscal year)

Plants	Unit	Regulatory value	Actual measured value				
			2012	2013	2014	2015	2016
Kokura No.2 Plant, TOTO LTD.	kg/day	5.75	0.05	0.08	0.06	0.04	0.04
HQ / Nakatsu Plant, TOTO SANITECHNO LTD.	kg/day	0.60	0.11	0.03	0.07	0.03	0.02
HQ / Nakatsu Plant, TOTO Fine Ceramics LTD.	kg/day	1.56	0.38	0.02	0.01	0.01	0.01
Oita Plant, TOTO AQUATECHNO LTD.	kg/day	4.98	0.40	0.30	0.30	0.30	0.20
Aichi Plant, TOTO SANITECHNO LTD.	kg/day	0.50	—	—	0.00	0.004	0.006

## Substances covered by the PRTR Law

Fiscal 2016

Order No.	Substance Name	Unit	Quantity used	Released quantity			Transferred quantity	
				Atmo-sphere	Water	Soil	to Sewage	to Outside
31	Antimony and its compounds	tons	53.7	—	—	—	—	10.4
71	Ferric chloride	tons	11.6	—	—	—	—	—
80	Xylene	tons	7.1	1.4	—	—	—	—
88	Hexavalent chrome compound	tons	3.7	0.001	0.029	—	—	1.1
133	2-Ethoxyethyl Acetate	tons	1.4	1.4	—	—	—	—
240	Styrene	tons	987.8	19.7	—	—	—	0.8
296	1,2,4-Trimethylbenzene	tons	6.1	0.02	—	—	—	—
300	Toluene	tons	46.6	9.4	—	—	—	36.8
308	Nickel	tons	12.3	—	—	—	—	2.8
309	Nickel compound	tons	4.1	—	0.04	—	—	2.6
354	Phthalate -n- butyl	tons	1.6	0.005	—	—	—	0.486
355	Bis (2-ethylhexyl)phthalate	tons	1.1	—	—	—	—	—
405	Boron and its compounds	tons	4.6	—	0.07	—	—	0.006
413	Phthalic anhydride	tons	5.8	0.28	—	—	—	0.019
420	Methyl methacrylate	tons	4.9	0.24	—	—	—	0.02
438	Methylnaphthalene	tons	17.9	0.06	—	—	—	—
448	Methylenebis (4,1-phenylen) =diisocyanate	tons	4.9	—	—	—	—	—

## Calculation method of Environmental Performance Data

Indicators	Calculation method
Scope 1 emissions	<p>CO<sub>2</sub> emissions from the use of fuel + Non-CO<sub>2</sub> and Non-Energy CO<sub>2</sub> Sources 【CO<sub>2</sub> emission coefficients】</p> <p>“Guideline for Calculation of Greenhouse Gas Emissions (Version 2.4)” published by Ministry of the Environment and Ministry of Economy, Trade and Industry of Japan</p>
Scope 2 emissions	<p>CO<sub>2</sub> emissions from purchased electricity and heat 【CO<sub>2</sub> emission coefficient from electricity (Japan)】</p> <p>“Guidelines for Calculating Corporate Greenhouse Gases Emissions (draft ver.1.6) ” published by Ministry of the Environment of Japan.</p> <p>【CO<sub>2</sub> emission coefficients from electricity (overseas)】</p> <p>GHG Protocol, Calculation Tools, “Indirect CO<sub>2</sub> Emission from Purchased Electricity. Version 3.0”</p> <p>【CO<sub>2</sub> emission coefficients from steam】</p> <p>“Guideline for Calculation of Greenhouse Gas Emissions (Version 2.4)” published by Ministry of the Environment and Ministry of Economy, Trade and Industry of Japan</p>
<p>Scope 3 Category 11 Emissions (Use of Sold Products)</p>	<p>Lifetime<sup>※1</sup> CO<sub>2</sub> emissions<sup>※2</sup> per unit from major products<sup>※3</sup> × Sales quantity</p> <p>※1 : Duration of use by product classification (defined by TOTO)</p> <p>※2 : CO<sub>2</sub> emissions from consumption of water and energy based on specifications and the usage models (based on the information published industry associations and research articles etc.) by sales areas</p> <p>※3 : Toilets, Washlets, faucets and bathtubs</p> <p>【 CO<sub>2</sub> emission coefficient from electricity (Japan)】</p> <p>Average for 5 years (from fiscal year 2009 to fiscal year 2013) of CO<sub>2</sub> emissions coefficient (adjust basis) indicated in “Environment Action Plan by the Japanese Electric Utility Industry” by the Federation of Electric Power Companies of Japan</p> <p>【 CO<sub>2</sub> emission coefficients from electricity (overseas)】</p> <p>GHG Protocol, Calculation Tools, “Indirect CO<sub>2</sub> Emission from Purchased Electricity. Version 3.0</p> <p>【 CO<sub>2</sub> emission coefficient from water (Japan)】</p> <p>“Approach book to promote household energy efficiency and home security” by The committee to promote household energy efficiency and home security</p> <p>【 CO<sub>2</sub> emission coefficients from water (overseas)】</p> <p>CO<sub>2</sub> emissions defined from research reports published by Ministry of the Environment and Ministry of Economy, Trade and Industry of Japan They are set from 0.39kg-CO<sub>2</sub>/m<sup>3</sup> to 1.11kg-CO<sub>2</sub>/m<sup>3</sup> by sales areas</p>



	<p>【CO<sub>2</sub> emission coefficient from Gas】</p> <p>“Guideline for Calculation of Greenhouse Gas Emissions (Version 4.1)” published by Ministry of the Environment and Ministry of Economy, Trade and Industry of Japan</p>
Quantity of Energy consumption	Total quantity of energy consumption of electricity, fuel and heat consumption at offices and factories
Quantity of purchased electricity	Total quantity of purchased electricity at offices and factories
Quantity of renewable energy generation	Total quantity of renewable electricity generated at offices and factories
Quantity of water consumption	Total quantity of water intake (municipal water, groundwater, and industrial water) into offices and factories
Quantity of groundwater consumption	Total quantity of groundwater intake into offices and factories
Quantity of discharged water	Total quantity of discharged water from offices and factories to sewage and river
Quantity of reused water	Total quantity of reused water in offices and factories
Quantity of waste generated	Total quantity of waste generated in offices and factories
Quantity of final disposal	Total quantity of final disposal without recycling in offices and factories
Recycling rate	Quantity of waste recycled / Quantity of waste generated × 100
Recycle rate of paper and cardboard in TOTO branch and sales offices	Recycle rate of paper and cardboard in TOTO branch and sales offices
Recycle rate of Paper and Cardboard in Group Sale/ Construction companies in Japan	Recycle rate of paper and cardboard in group sale/ construction companies in Japan
Chemical substance emissions	Total quantity of chemical substance emissions
SOx emissions	Total quantity of SOx emissions
NOx emissions	Total quantity of NOx emissions
Dust emissions	Total quantity of dust emissions
COD (Chemical Oxygen Demand)	Average measured value of COD in 5 offices of TOTO group offices in Japan which are subject to the total pollution control load systems
Nitrogen content	Average measured value of nitrogen content in 5 offices of TOTO group offices in Japan which are subject to the total pollution regulation
Phosphorus content	Average measured value of phosphorus content in 5 offices of TOTO group offices in Japan which are subject to the total pollution regulation
Substances covered by the PRTR Law	Total quantity of subject chemical substances that exceeds the total annual handling capacity of 1 ton (0.5 tons and above for Special Class 1) in the 16 business locations that are subject to the PRTR Law

# Independent Assurance Report



## Independent Assurance Report

To the President, Representative Director of TOTO LTD.

We were engaged by TOTO LTD. (the “Company”) to undertake a limited assurance engagement of the environmental performance indicators marked with “☑” for the period from April 1, 2016 to March 31, 2017 (the “Indicators”) included in its Fiscal 2016 Environmental data sheet (the “Environmental data sheet”) for the fiscal year ended March 31, 2017.

### The Company’s Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the “Company’s reporting criteria”), as described in the Environmental data sheet.

### Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with ‘International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information’, ‘ISAE 3410, Assurance Engagements on Greenhouse Gas Statements’, issued by the International Auditing and Assurance Standards Board, and the ‘Practical Guidelines for the Assurance of Sustainability Information’ of the Japanese Association of Assurance Organizations for Sustainability Information. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Environmental data sheet, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing with the Company’s responsible personnel to obtain an understanding of its policy for the preparation of the Environmental data sheet and reviewing the Company’s reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical reviews of the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company’s reporting criteria, and also recalculating the Indicators.
- Visiting four of the Company’s subsidiaries domestic and overseas selected on the basis of a risk analysis.
- Evaluating the overall statement in which the Indicators are expressed.

### Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Environmental data sheet are not prepared, in all material respects, in accordance with the Company’s reporting criteria as described in the Environmental data sheet.

### Our Independence and Quality Control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Control 1, we maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

*KPMG AZSA Sustainability Co., Ltd.*

KPMG AZSA Sustainability Co., Ltd.

Osaka, Japan

June 5, 2017