



Benchmarking Exercise

Material prepared for Int. Benchmarking Exercise

data spreadsheet of

Goodwater

(Utility #2)

Full list of variables

Goodwater

Variable Name	Category	Goodwater
Terrain ()	Context information	Hilly
Disposable income per household (€)	Context information	27,552
CI-008 Type of system ()	Context information	Both bulk water supply and direct distribution
CI-014 Supply area (km2)	Context information	424
CI-023 Protection area (km2)	Context information	0.063
CI-026 Number of treatment plants (No.)	Context information	2
CI-NEW-001 Responsible for service connection ()	Context information	yes
CI-002 Type of activity ()	Context information	water supply only
CI-003 Type of assets ownership ()	Context information	Private
CI-004 Type of operations (management)	Context information	Private
zCI-095 Upland surface water sources (m3)	Context information	0
zCI-096 Lowland surface water sources (m3)	Context information	87,778,272
zCI-097 Natural springs and wetland sources (m3)	Context information	300,650
zCI-098 Well water sources (m3)	Context information	0
zCI-099 Borehole water sources (m3)	Context information	34,712,213
zCI-100 Saline and brackish water sources (m3)	Context information	5,213,319
zCI-NEW-001 Vat return ()	Context information	yes
zCI-NEW-002 Asset valuation method ()	Context information	Valuation based on historical prices
zCI-NEW-007 VAT on top of bill ()	Context information	yes
E-005 Resident population (No.)	Demography and customer	2,845,416
E-006 Direct customer meters (No.)	Demography and customer	1,366,444
E-009 Bulk customer meters (No.)	Demography and customer	31
E-010 Registered customers (No.)	Demography and customer	1,390,961
E-011b Bulk registered customers (No.)	Demography and customer	31
zE-001 Total connected properties (No.)	Demography and customer	1,415,503
E-001 Residential properties supplied (No.)	Demography and customer	1,386,856
E-001a Non-residential properties supplied (No.)	Demography and customer	28,647
E-007 Residential customer meters (No.)	Demography and customer	1,354,652
E-008 Non-residential customer meters (No.)	Demography and customer	11,792
E-011 Residential registered customers (No.)	Demography and customer	1,373,097
E-011a Non-residential registered customers (No.)	Demography and customer	17,833
G-001 Total revenues (€)	Financial	228,793,578
G-002a Operating revenues from drinking water activities (€)	Financial	272,928,163
G-002b Operating revenues from non drinking water activities (€)	Financial	0
G-003 Sales revenues (€)	Financial	215,126,906
G-032 Investment in tangible assets (€)	Financial	44,134,585
G-035 Capitalised costs of self constructed assets (€)	Financial	44,134,585
G-036 Water sales revenues from direct consumption (€)	Financial	213,353,565
G-037 Water sales revenues from exported water (€)	Financial	1,773,341

Full list of variables

Goodwater

Variable Name	Category	Goodwater
zCI-NEW-001a Vat return amount (€)	Financial	28,267,802
zG-NEW-001 Residential connection fee (€)	Financial	
zG-NEW-002 Indirect taxes (€)	Financial	219,048,491
zG-NEW-004 Percentage of indirect taxes on residential water bill (%)	Financial	7
G-004 Total costs (€)	Financial	205,984,500
G-005 Running costs (€)	Financial	167,069,517
G-006 Capital costs (€)	Financial	38,914,983
G-007 Operational costs (€)	Financial	107,846,089
G-008 Internal manpower costs (€)	Financial	59,223,428
G-009 External services costs (€)	Financial	48,986,667
G-010 Imported raw and drinking water costs (€)	Financial	36,784,087
G-011 Electrical energy costs (€)	Financial	7,205,287
G-012 Purchased merchandises (€)	Financial	6,184,532
G-013 Leasing and rentals (€)	Financial	1,711,973
G-014 Taxes, levies and fees (€)	Financial	6,973,543
G-015 Exceptional earnings and losses (€)	Financial	0
G-016 Other operating costs (€)	Financial	0
G-028 Depreciation costs (€)	Financial	29,307,525
G-029 Interest expenses costs (€)	Financial	9,607,458
G-030 Interest income (€)	Financial	0
G-031 Net interest (€)	Financial	9,607,458
G-033 Investments for new assets (€)	Financial	0
G-034 Investments for asset replacements (€)	Financial	44,134,585
G-036a Water sales revenues from residential consumption (€)	Financial	164,922,306
G-036b Water sales revenue from non-residential consumption (€)	Financial	48,431,259
G-048 Shareholder's equity (€)	Financial	149,641,707
G-050 Total assets (€)	Financial	460,987,263
CI-053 Average mains age (years)	Operational	25
D-001 Pumping energy consumption (kWh)	Operational	89,672,068
D-005 Energy recovery (kWh)	Operational	
D-028 Mains failures (No.)	Operational	1,985
D-028a Mains failures caused by third parties (No.)	Operational	384
D-028b Mains failures under own responsibility (No.)	Operational	1,601
D-038 Days with restrictions to water service (days)	Operational	0
D-051 Drinking water quality tests carried out (No.)	Operational	651,685
D-053 Aesthetic tests carried out (No.)	Operational	81,619
D-054 Microbiological tests carried out (No.)	Operational	22,589
D-055 Physical-chemical tests carried out (No.)	Operational	547,313
D-056 Radioactivity tests carried out (No.)	Operational	164
D-062 Compliance of aesthetic tests (No.)	Operational	81,574
D-063 Compliance of microbiological tests (No.)	Operational	22,508
D-064 Compliance of physical-chemical tests (No.)	Operational	545,833
D-065 Compliance of radioactivity tests (No.)	Operational	164
D-20 Mains rehabilitation (km)	Operational	21
D-21 Mains renovation (km)	Operational	1
D-22 Mains replacement (km)	Operational	20
zD-NEW-001 Treatment residuals (ton d.s.)	Operational	3,417
zD-NEW-002 Wasted treatment residu (tons D.S.)	Operational	465
B-001 Total personnel (FTE)	Personnel	992
B-018 Total training time (hours)	Personnel	
zB-001 Total FTE normalised (FTE)	Personnel	975

Full list of variables

Goodwater

Variable Name	Category	Goodwater
zB-025 Nominal working week length (hours/week)	Personnel	39
C-008 Mains length (km)	Physical assets	4,559
C-024 Service connections (No.)	Physical assets	208,074
zC-024 New service connections (No.)	Physical assets	
C-024a Residential service connections (No.)	Physical assets	200,375
C-024b Non-residential service connections (No.)	Physical assets	7,699
F-001 Population supplied (No.)	Quality of service	2,845,416
zF-015 Total complaints (No.)	Quality of service	
F-015 Service complaints (No.)	Quality of service	6,642
F-016 Pressure complaints (No.)	Quality of service	0
F-017 Continuity complaints (No.)	Quality of service	531
F-018 Water quality complaints (No.)	Quality of service	16
F-019 Complaints on interruptions (No.)	Quality of service	6,095
F-020 Billing complaints and queries (No.)	Quality of service	8,965
F-021 Other complaints and queries (No.)	Quality of service	
A-003 System input volume (m3)	Water volume	218,949,370
A-007 Exported drinking water (m3)	Water volume	7,943,328
A-020 Revenue water (m3)	Water volume	174,309,636
A-021 Non revenue water (m3)	Water volume	44,639,734
zA-005 Imported raw water (m3)	Water volume	0
zA-007 Imported drinking water (m3)	Water volume	90,944,916
zA-020 Direct revenue drinking water (m3)	Water volume	166,366,308
zA-NEW-001 Total volume of abstracted raw water (m3)	Water volume	128,004,454
zA-NEW-002 Exported and direct revenue raw water (m3)	Water volume	0
zA-NEW-003 Net volume of raw water exchanged with storage (m3)	Water volume	0
A-006 Water produced (m3)	Water volume	120,902,214
A-019 Real losses (m3)	Water volume	2,252,250
A-021a Production losses (m3)	Water volume	7,102,240
A-021b Distribution losses and unbilled consumption (m3)	Water volume	37,537,494
zA-006 Distribution Input (m3)	Water volume	211,847,130
zA-020a Residential billed authorised drinking water (m3)	Water volume	126,383,917
zA-020b Non-residential billed authorised drinking water (m3)	Water volume	39,982,391
zA-NEW-004 Unbilled consumption and apparent losses (m3)	Water volume	35,285,244
zA-NEW-004a Unbilled consumption (m3)	Water volume	35,285,244
zA-NEW-004b Apparent losses (m3)	Water volume	18,302,512

Full list of PIs and context information

PI name	Category
CI-076 Network delivery rate (m ³ /km.year)	Context information
CI-061 Service connection density (No./km)	Context information
zCI-070 Total per capita consumption (l per capita per day)	Context information
zCI-072 Average consumption per property (m ³ / property)	Context information
CI-071 Residential consumption (l per capita per day)	Context information
zCI-072a Residential consumption per residential property (m ³ /property)	Context information
zCI-072b Consumption per non-residential property (m ³ /property)	Context information
NEW Population density DW (people/km ²)	Context information
NEW Produced water per treatment plant (m ³ /No.)	Context information
Fi-028 Average water charges for direct consumption (€/m ³)	Economic & Financial
Fi-029 Average water charges for exported water (€/m ³)	Economic & Financial
Pe-001 Employees per service connection (FTE/1000 connections)	Economic & Financial
zCI-071 Average water charges per connected property (€/property)	Economic & Financial
zPe-001 Personnel intensity (FTE/1000 properties)	Economic & Financial
Fi-004 Unit total costs (€/m ³)	Economic & Financial
Fi-005 Unit running costs (€/m ³)	Economic & Financial
Fi-006 Unit capital costs (€/m ³)	Economic & Financial
Fi-007 Internal manpower costs (%)	Economic & Financial
Fi-008 Portion of external services costs in running costs (%)	Economic & Financial
Fi-009 Portion of imported [raw and drinking] water costs in running costs (%)	Economic & Financial
Fi-010 Portion of electrical energy costs in running costs (%)	Economic & Financial
Fi-011 Portion of other costs in running costs (%)	Economic & Financial
Fi-023 Portion of depreciation costs in capital costs (%)	Economic & Financial
Fi-024 Portion of net interest costs in capital costs (%)	Economic & Financial
Fi-025 Unit investment (€/m ³)	Economic & Financial
Fi-026 Investments for new assets and reinforcement of existing assets (%)	Economic & Financial
Fi-027 Investments for asset replacement and renovation (%)	Economic & Financial
Fi-028a Average water charges for residential consumption (€/m ³)	Economic & Financial
Fi-028b Average water charges for non-residential consumption (€/m ³)	Economic & Financial
Fi-030 Total cost coverage ratio ()	Economic & Financial
Fi-031 Operating cost coverage ratio ()	Economic & Financial
Fi-045 Asset turnover ratio ()	Economic & Financial
Pe-002 Employees per water produced (FTE/10 ⁶ m ³)	Economic & Financial
zCI-071a Average water charges for residential properties (€/property)	Economic & Financial
zCI-071b Average water charges for non-residential properties (€/property)	Economic & Financial
zFi-NEW-001 Unit profit costs (€/m ³)	Economic & Financial
zFi-NEW-002 Equity ratio ()	Economic & Financial
zFi-030 Total cost by sales coverage ratio ()	Economic & Financial
zFi-031 Operating costs by sales ratio ()	Economic & Financial
Fi-NEW-020 Share of water bill in disposable household income (%)	Economic & Financial
Op-027 Real losses per connection (l/connection/day)	Operational
Op-028 Real losses per mains length (m ³ /km/day)	Operational
Op-031 Mains failures (No./100 km)	Operational
zOp-027 Distribution losses per connection (m ³ /connection)	Operational
zOp-028 Distribution losses per mains length (m ³ /km/day)	Operational
zOp-031a Mains failures due to third parties (No./100 km)	Operational
zOp-031b Mains failures under own responsibility (No./100km)	Operational
zOp-023 Non-revenue water per connected property (m ³ / property)	Operational

Full list of PIs and context information

PI name	Category
Op-016 Mains rehabilitation (%/year)	Operational
Op-017 Mains renovation (%/year)	Operational
Op-018 Mains replacement (%/year)	Operational
zOp-NEW-001 Electricity use per m3 water produced (kWh/m3)	Operational
Pe-019 Total training (hours/employee)	Personnel
Ph-011 Customer meter density (meters/connection)	Physical
Ph-012 Metered customers (meters/customer)	Physical
zPh-012 Metered properties (%)	Physical
Ph-007 Energy recovery (%)	Physical
QS-003 Population coverage (%)	Quality of service
zQS-003 Household size (people/property)	Quality of service
QS-017 Days with restrictions to water service (%)	Quality of service
QS-026 Service complaints per connection (complaints/1000 connections)	Quality of service
QS-027 Service complaints per customer (complaints/ 1000 customers)	Quality of service
QS-028 Pressure complaints (%)	Quality of service
QS-029 Continuity complaints (%)	Quality of service
QS-030 Water quality complaints (%)	Quality of service
QS-031 Interruption complaints (%)	Quality of service
QS-032 Billing complaints and queries per customer (complaints/1000 customers)	Quality of service
QS-033 Other complaints & queries per customer (complaints/1000 customers)	Quality of service
zQS-027 Service complaints per connected property (complaints/1000 properties)	Quality of service
QS-018 Quality of supplied water (%)	Quality of service
QS-019 Aesthetic tests compliance (%)	Quality of service
QS-020 Microbiological tests compliance (%)	Quality of service
QS-021 Physical-chemical tests compliance (%)	Quality of service
QS-022 Radioactivity tests compliance (%)	Quality of service
zQS-NEW-001 Drinking water quality tests carried out per connection (tests/1000 connections)	Quality of service
zQS-NEW-001a Drinking water quality tests carried out per m3 drinking water (tests/1000 m3)	Quality of service
zWR-001 Inefficiency of use of water resources (%)	Water resources
zWR-001a Inefficiency of use of water production (%)	Water resources

Benchmarking Exercise

Material Prepared for Int. Benchmarking Exercise



Final list of PIs and context information

Goodwater

PI name	Category	Goodwater PI value	Goodwater Accuracy	Goodwater Reliability
CI-076 Network delivery rate (m ³ /km.year)	Context information	46,465.45		
CI-061 Service connection density (No./km)	Context information	45.64		
CI-071 Residential consumption (l per capita per day)	Context information	121.69		
Fi-029 Average water charges for exported water (€/m3)	Economic & Financial	0.22	0-5%	**
Pe-001 Employees per service connection (FTE/1000 connections)	Economic & Financial	4.68	0-5%	***
Fi-028a Average water charges for residential consumption (€/m3)	Economic & Financial	1.30	0-5%	**
Fi-028b Average water charges for non-residential consumption (€/m3)	Economic & Financial	1.21	0-5%	***
Fi-030 Total cost coverage ratio ()	Economic & Financial	1.11	5-20%	***
Fi-031 Operating cost coverage ratio ()	Economic & Financial	1.37	5-20%	***
zCI-071a Average water charges for residential properties (€/property)	Economic & Financial	118.92		
zCI-071b Average water charges for non-residential properties (€/property)	Economic & Financial	1,690.62		
zFi-030 Total cost by sales coverage ratio ()	Economic & Financial	1.04	5-20%	***
zFi-031 Operating costs by sales ratio ()	Economic & Financial	1.29	5-20%	***
Fi-NEW-020 Share of water bill in disposable household income (%)	Economic & Financial	0.46	5-20%	**
zOp-027 Distribution losses per connection (m3/connection)	Operational	180.40	5-20%	**
zOp-028 Distribution losses per mains length (m3/km/day)	Operational	22.56	5-20%	**
zOp-NEW-001 Electricity use per m3 water produced (kWh/m3)	Operational	0.74	0-5%	***
zPh-012 Metered properties (%)	Physical	96.53	0-5%	***
QS-003 Population coverage (%)	Quality of service	100.00	0-5%	**
QS-017 Days with restrictions to water service (%)	Quality of service	0.00	0-5%	***
zQS-027 Service complaints per connected property (complaints/1000 properties)	Quality of service	4.69	5-20%	**
QS-018 Quality of supplied water (%)	Quality of service	99.75	0-5%	***
zWR-001 Inefficiency of use of water resources (%)	Water resources	20.39	5-20%	**