



THE NETHERLANDS WATERWORKS ASSOCIATION (VEWIN)

# Water Supply Statistics 2002





# VEWIN Water Supply Statistics 2002

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# Introduction

## Objective

Water Supply Statistics is an annual VEWIN publication. It contains basic data on the drinking water sector which is destined for the sector in support of policy. Water Supply Statistics means VEWIN also supplies transparent information on the water sector using the statistical data for supply of information to third parties such as ministries, the European Union, companies, institutions and consumers.

## Collecting the data

Since 1997 most Dutch water supply companies have been taking part voluntarily in the VEWIN benchmark report that is used to report the performance of the companies concerned in terms of water quality, level of service, environmental performance, finance and efficiency.

Since 2000, to relieve water companies of some of the administrative load, data for water supply statistics were gathered together with the data for the benchmark report using the benchmark module *Finance & Efficiency*. A separate questionnaire was drawn up for companies not taking part in the voluntary benchmark report. The publication also contains tables whose data have been derived from other sources. The rates overview (table 7) for instance comes from the VEWIN publication *Overview of water charges as of 1 January 2002* (Tarievenoverzicht leidingwater per 1 januari 2002) and the overview of the breakdown of domestic water consumption (table 8) comes from the VEWIN/NIPO report *A different pattern of consumption* (Een ander consumptiepatroon) of December 2001.

## Structure of the publication

Readers who want to review the most significant sector data at a glance should find enough in the summary overview on the next page. After the summary overview a breakdown follows according to theme:

- *chapter 1*: the water companies, the supply areas and employment;
- *chapter 2*: water production and raw water sources;
- *chapter 3*: water sales;
- *chapter 4*: financial data (balance sheet, investments and taxes);
- *chapter 5*: infrastructure.

## Water supply statistics available on internet

The water supply statistics are available on [www.vewin.nl](http://www.vewin.nl).

## Other VEWIN reports

Besides the *Water Supply Statistics 2002* VEWIN produces other publications with information about water companies. A list of these can be found in appendix 1.

# Summary overview

	1992	1997	2001	2002
<b>General</b>				
number of water companies	42	30	22	17 <sup>1)</sup>
employees as full-time equivalents <sup>2)</sup>	8,341	7,655	6,114	5,867
drinking water connections (x 1,000) <sup>3)</sup>	5,802	6,437	7,166	7,231
% metered	92	90	96	96
<b>Production (million m<sup>3</sup>)</b>				
<i>drinking water</i>				
own production	1,222	1,189	1,175	1,168
import balance and purchase from third parties	8	5	3	2
<i>other water</i>				
own production <sup>4)</sup>	58	69	62	53
import balance and purchase from third parties	7	6	7	13
<b>Supply (million m<sup>3</sup>)</b>				
<i>drinking water</i>				
small scale users	718	712	714	709
medium scale users	254	237	226	225
large scale users <sup>5)</sup>	197	188	179	177
water not charged <sup>6)</sup>	61	58	58	57
<i>other water</i>				
domestic water	.	.	0.18	0.36
other applications <sup>4)</sup>	65	75	70	67
<b>Income from deliveries (million euro)</b>				
<i>drinking water</i>				
small scale users	614	887	997	990
medium scale users	147	227	267	265
large scale users <sup>5)</sup>	111	163	171	172
<i>other water</i>				
domestic water	.	.	0.18	0.36
other applications <sup>4)</sup>	20	22	29	30
<b>Financial data (million euro)</b>				
investments	519	509	426	374
taxes <sup>7)</sup>	.	.	355	358
<sup>1)</sup> Including Bronwaterleiding Doorn. <sup>2)</sup> Number of employees on payroll calculated as people working full-time. <sup>3)</sup> Since 2000 administrative connections, before 2000 technical connections. Definitions of technical and administrative connections are shown in table 1. <sup>4)</sup> Excluding production and supply by subsidiary and associate companies (approximately 65 million m <sup>3</sup> in 2002). <sup>5)</sup> Including industrial process water of drinking water quality. <sup>6)</sup> Mainly leakage and firewater. <sup>7)</sup> A specification is given in table 11.				

## Chapter 1 The water companies

The water companies operating at the end of 2002 are shown in table 1. Figure 1 shows the relevant supply areas.

Almost all companies are limited liability companies with municipalities and provinces functioning as shareholders. Exceptions to this are Gemeentewaterleidingen Amsterdam, a municipal water company, and the private limited company Delta Drinkwater, a full subsidiary of the multi-utility company Delta NV.

Watertransportmaatschappij Rijn-Kennemerland and Waterwinningsbedrijf Brabantse Biesbosch do not distribute drinking water and therefore have been shown in the table as production companies. All other companies both produce and distribute drinking water.

Figure 2 shows the development of employment in the drinking water sector in terms of full-time equivalents (ftes). This shows that the water companies are undertaking their work with steadily fewer people. The number of employees on the payroll of water companies dropped from 8,341 ftes in 1992 to 5,867 ftes in 2002 (-30%). Since 1999 the purchase of external services too declined by one quarter: converted to ftes, external services purchased amounted to 5,323 in 1999, compared to no more than 4,016 in 2002. The number of temporary staff fluctuated between 524 and 548 ftes over the past three years.

Figure 1 Supply areas on 31-12-2002 <sup>1)</sup>

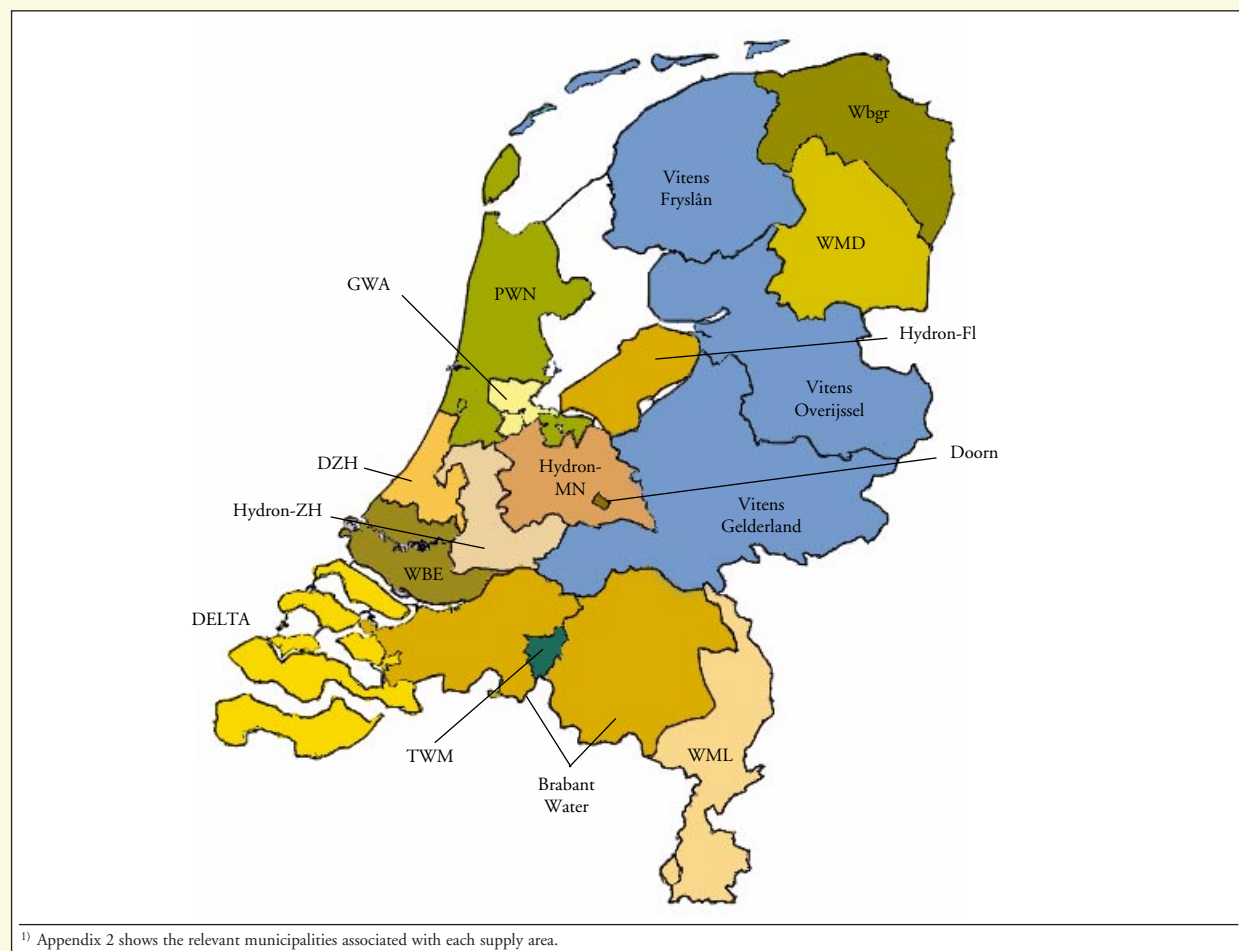


Table 1 Overview of the water companies on 31-12-2002 <sup>1)</sup>

Water company	code name	legal form <sup>2)</sup>	nature <sup>3)</sup>	em- ployees (fte) <sup>4)</sup>	technical connec- tions <sup>5)</sup>	administra- tive connec- tions <sup>6)</sup>	inhabitants in supply area
<i>x1000</i>							
Waterbedrijf Groningen	Wbgr	LLC	PD	234	262	269	584
Waterleidingmaatschappij Drenthe	WMD	LLC	PD	176	181	185	433
Vitens	Vitens	LLC	PD	1,109	1,557	1,598	3,758
PWN Waterleidingbedrijf Noord-Holland	PWN	LLC	PD	585	643	700	1,595
Gemeentewaterleidingen Amsterdam <sup>7)</sup>	GWA	M	PD	598	179	465	856
Watertransportmaatschappij Rijn Kennemerland <sup>8)</sup>	WRK	LLC	P	100	-	-	-
Duinwaterbedrijf Zuid-Holland	DZH	LLC	PD	565	357	568	1,158
Waterbedrijf Europoort	WBE	LLC	PD	419	482	738	1,493
Hydron Zuid-Holland	Hydron-ZH	LLC	PD	223	299	315	739
Hydron Flevoland	Hydron-Fl	LLC	PD	89	118	115	290
Hydron Midden-Nederland	Hydron-MN	LLC	PD	402	472	531	1,215
Delta Drinkwater	DELTA	PLC	PD	42	207	217	451
Brabant Water	Brabant Water	LLC	PD	724	842	929	2,196
Tilburgsche Waterleiding-Maatschappij	TWM	LLC	PD	99	72	90	199
Waterwinningbedrijf Brabantse Biesbosch	WBB	LLC	P	52	-	-	-
Waterleidingmaatschappij Limburg	WML	LLC	PD	452	462	511	1,142
<b>The Netherlands</b>				<b>5,867</b>	<b>6,133</b>	<b>7,231</b>	<b>16,109</b>

<sup>1)</sup> The NV Bronwaterleiding Doorn was also in operation. This publication does not include data on this company which has an annual drinking water production touching 2.5million m<sup>3</sup>.

<sup>2)</sup> M = municipal company; LLC = limited liability company; PLC = private limited company.

<sup>3)</sup> P = production company; D = distribution company; PD = production and distribution company.

<sup>4)</sup> Full-time equivalents on own pay-roll.

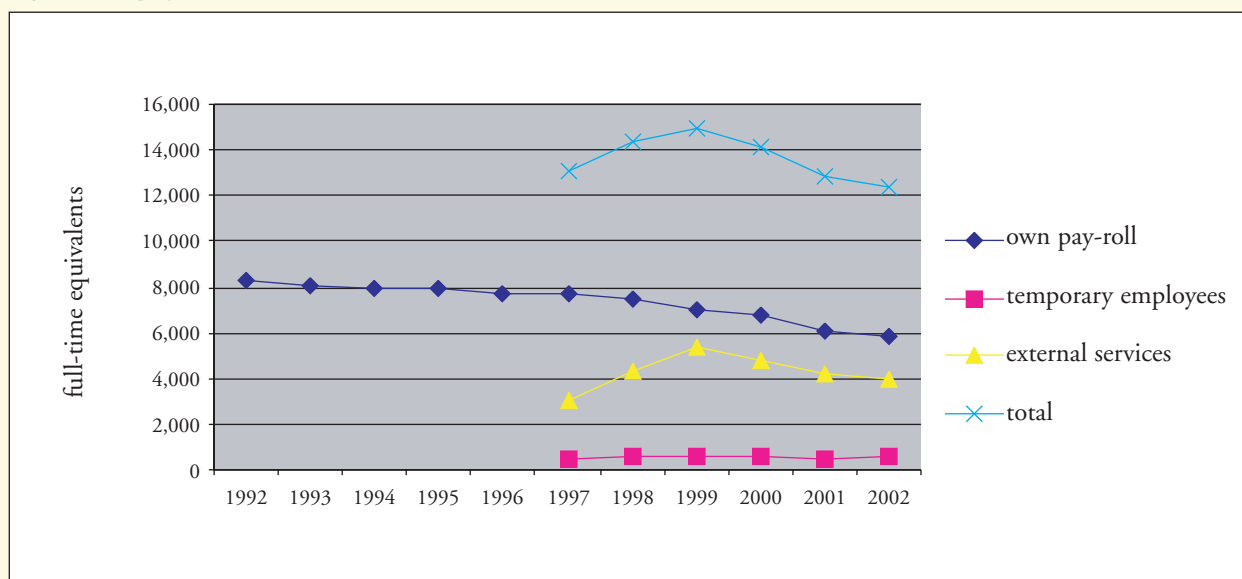
<sup>5)</sup> A technical connection consists of the distribution pipe between the mains network and the end user, including water meter (if present).

<sup>6)</sup> An administrative connection is taken to mean a premises related to the technical connection (e.g. an apartment).

<sup>7)</sup> Since 30 June 2003: Waterleidingbedrijf Amsterdam.

<sup>8)</sup> Since 1 January 2003 partly operated by GWA and partly by PWN.

Figure 2 Employment 1992 - 2002



## Chapter 2 Water production

### ~ *Water balance*

Figure 3 shows the water balance for the year 2002. It shows the amounts of water extracted, produced and supplied for all companies together. Purchases from third parties (non-water companies) as well as imports and exports have also been included. Water extraction has been indicated per type of raw water source and according to processing method (*direct processing* and *infiltration*). Supply has been divided into supplies to differentiated sectors of final users and supplies between companies themselves (*wholesale supply*).

Chapter 3 discusses the water supply in greater detail. This chapter sheds greater light on water extraction and water production.

### ~ *Water extraction*

At the top of the water balance the quantities of water extracted are indicated per type of raw water source. In table 2 these figures are specified per water company and figure 4 shows water extraction as of the year 1992. The use of surface water increased by 4.1 percentage points over the past ten years to reach 39.5% in 2002. At the same time the use of river groundwater and groundwater dropped by 2.8 percentage points (to a share of 59.6%) and the use of natural dune water dropped by 1.3 percentage points (to a share of 0.9%).

### ~ *Water production*

Table 3 shows the amounts produced of drinking water and *other water* by water companies. In 2002 water companies together produced 1,168 million m<sup>3</sup> of drinking water; compared to 1,175 million m<sup>3</sup> in 2001. Since 1992 drinking water production decreased by 54 million m<sup>3</sup> (-4.4%). This development is shown in figure 5.

According to figure 6 the production of *other water* dropped from 58 million m<sup>3</sup> in 1992 down to 53 million m<sup>3</sup> in 2002. This water lends itself for applications that require a lower quality level than drinking water or, on the contrary, a higher quality level (demi-water). The decline results from the fact that since the early 1990s a number of drinking water companies assigned activities regarding *other water* to subsidiaries or sister companies. In 2002 these separate companies, together with subsidiaries involved in this activity obtained in other ways, produced 65 million m<sup>3</sup> of *other water*.

Figure 3 Water balance 2002 (in millions m<sup>3</sup>)

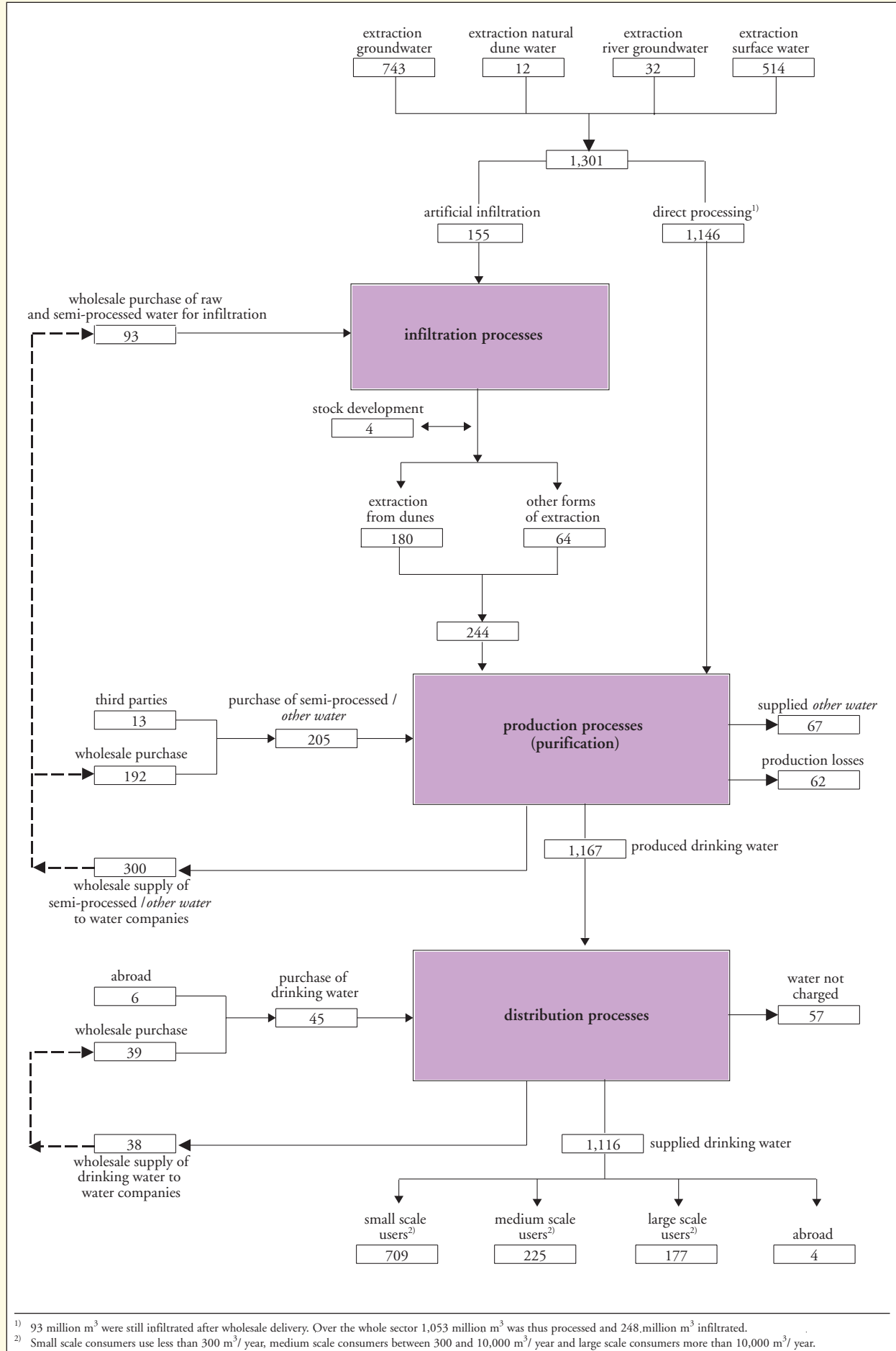


Table 2 Water extraction 2002

company	groundwater	river groundwater	natural dune water	surface water	total
	<i>million m<sup>3</sup></i>				
Wbgr	46	-	-	17	63
WMD	31	-	-	-	31
Vitens	253	6	-	7	265
PWN	5	-	1	26	32
GWA	-	-	10	28	38
WRK	1	-	-	150	151
DZH	-	-	-	82	82
WBE	4	-	-	-	4
Hydron-ZH	35	14	-	-	49
Hydron-Fl	24	-	-	-	24
Hydron-MN	76	-	-	-	76
DELTA	16	-	0	6	23
Brabant Water	173	2	-	-	174
TWM	13	-	-	-	13
WBB	-	-	-	198	198
WML	67	11	-	-	77
<b>The Netherlands</b>	<b>743</b>	<b>32</b>	<b>12</b>	<b>514</b>	<b>1,301</b>

Table 3 Water production 2002

company	drinking water	other water <sup>1)</sup>	total
	<i>million m<sup>3</sup></i>		
Wbgr	48	13	60
WMD	30	-	30
Vitens	256	2	258
PWN	88	-	88
GWA	93	2	94
WRK	-	147	147
DZH	76	0	77
WBE	148	-	148
Hydron-ZH	47	-	47
Hydron-Fl	19	5	24
Hydron-MN	78	0	78
DELTA	35	-	35
Brabant Water	165	4	169
TWM	13	-	13
WBB	-	180	180
WML	72	-	72
<b>The Netherlands total</b>	<b>1,168</b>	<b>353</b>	<b>1,521</b>
<i>wholesale delivery or other water</i>		300	300
<i>net production</i>	1,168	53	1,221

<sup>1)</sup> Excluding production by subsidiaries and associate companies (approximately 65 million m<sup>3</sup>).

Figure 4 Water extraction 1992 - 2002

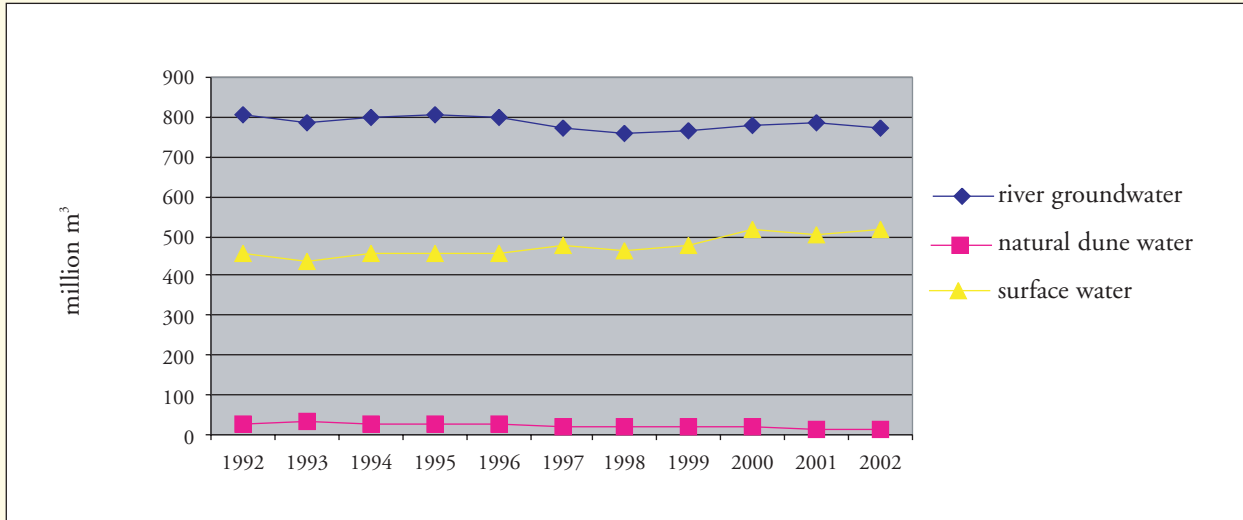


Figure 5 Production of drinking water 1992 - 2002

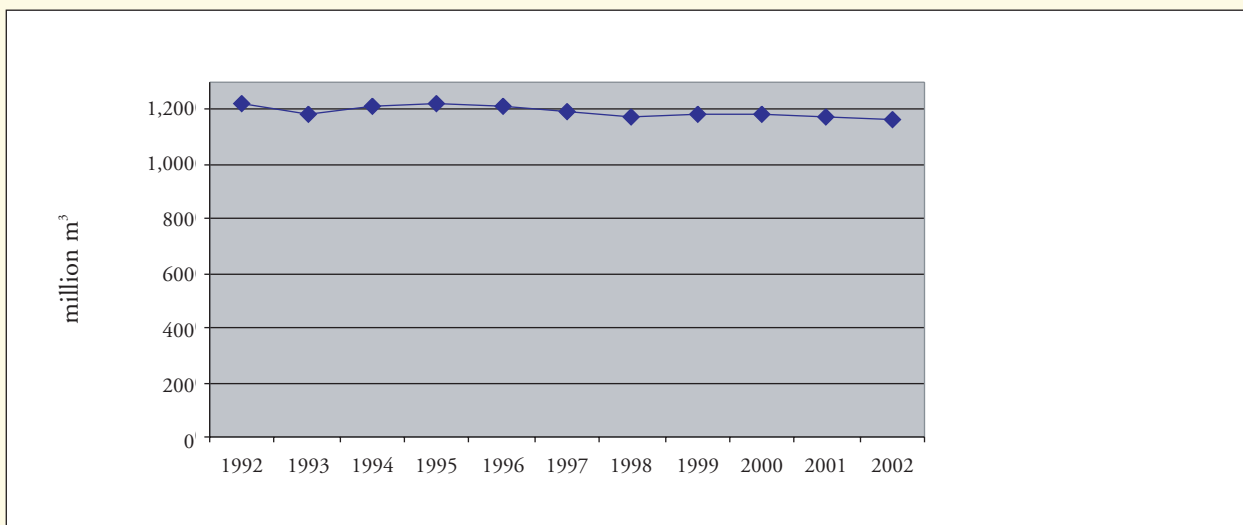
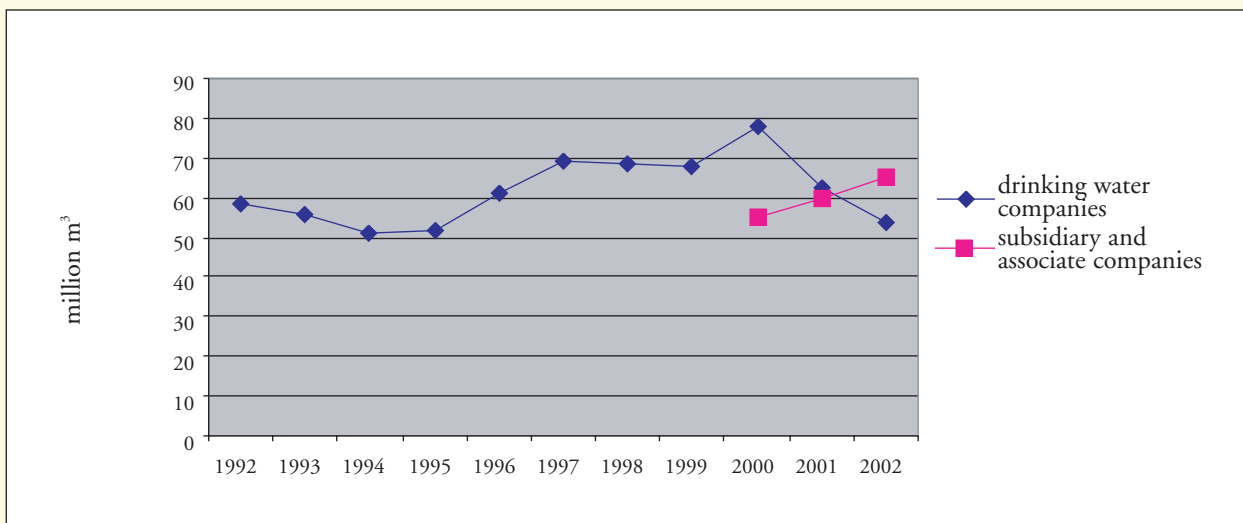


Figure 6 Production of other water 1992 - 2002



## Chapter 3 Water sales

### ~ Water sales 2002

The Water balance 2002 (figure 3) shows the deliveries of drinking water and *other water* at national level.

This chapter indicates the turnover and the number of connections related to the deliveries.

For *Netherlands total* these details have been summarised in table 4. Some derived indices for the various consumer groups have also been indicated, such as the average consumption per connection and the average price per m<sup>3</sup>.

Table 4 Summary of water sales 2002

	connections <sup>1)</sup>	supply	average supply per connection	supply income <sup>2)</sup>	average price <sup>2)</sup>
		million m <sup>3</sup>	m <sup>3</sup> /connection	million €	€/m <sup>3</sup>
<b>Drinking water</b>					
<i>Final users</i>	7,231,008	1,111	154	1,427	1.28
of which small scale users	6,948,686	709	102	990	1.40
medium scale users	278,027	225	810	265	1.18
large scale users <sup>3)</sup>	4,295	177	41,186	172	0.97
<i>Wholesale sales</i>	.	38	.	18	0.49
<i>Exports</i>	.	4	.	.	.
<b>Other water</b>					
<i>Final users</i>	10,629	67	6,323	30	0.45
of which domestic users	10,279	0.36	35	0.36	1.00
other <sup>4)</sup>	350	67	190,979	30	0.44
<i>Wholesale sales</i>	.	300	.	40	0.13
<i>Exports</i>	-	-	.	-	.
<b>Total</b>					
<i>Final users</i>	7,241,637	1,178	163	1,457	1.24
<i>Wholesale sales</i>	.	338	.	59	0.17
<i>Exports</i>	.	4	.	.	.

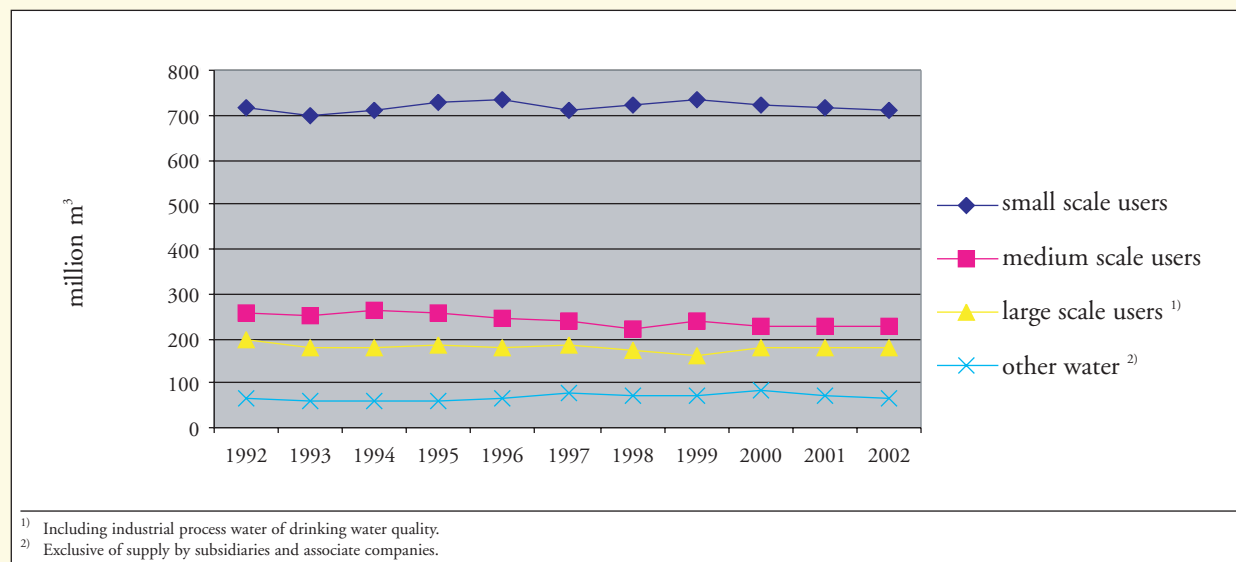
<sup>1)</sup> Administrative connections for drinking water, technical connections for *other water*.  
<sup>2)</sup> Comprises standing charges and the variable rate.  
<sup>3)</sup> Including industrial process water of drinking water quality.  
<sup>4)</sup> Exclusive of sales by subsidiaries and associate companies (approximately 65 million m<sup>3</sup>).

Tables 5 and 6 show the connections, the supply and supply turnover for each water company per consumer group. The tables indicate the outcomes for the large scale market including export, wholesale deliveries and delivered industrial process water of drinking water quality. Only for total Netherlands (at the bottom of table 6) a distinction is made between large scale final users, *wholesale* sales and exports.

### ~ Sales development

Figure 7 indicates the water sales development for the different consumer groups. Drinking water sales went down by 58 million m<sup>3</sup> since 1992 (-5%) while the supply of *other water*, including 65 million m<sup>3</sup> from the subsidiaries as referred to in the footnote to table 3, increased by 67 million m<sup>3</sup> (+103%). Within the drinking water sector small scale consumption decreased by 9 million m<sup>3</sup> (-1.3%) compared to 1992, sales to medium scale and large scale consumers decreased by 49 million m<sup>3</sup> (-10.9%).

Figure 7 Delivery to final users 1992 - 2002



~ Development of prices and income

Figure 8 shows the income development resulting from water supply, exclusive of indirect taxes (VAT and tap water taxation on the first 300 m<sup>3</sup>). Income rose from € 892 million in 1992 to € 1,457 million in 2002.

The weighted average prices per consumer group calculated from the income and quantities supplied have been indicated in figure 9. The average price per m<sup>3</sup> for all consumer groups increased from € 0.75 in 1992 to € 1.28 in 2002; the price of *other water* went up from € 0.31 to € 0.45.

Some 30% of the increase of the drinking water price is due to general depreciation (+€ 0.16/m<sup>3</sup>); 23% is caused by the introduction in 1995 of groundwater tax (+€ 0.12/m<sup>3</sup>, see table 11).

Table 5 Connections on 31-12-2002<sup>1)</sup>

company	technical connections <sup>2)</sup>					administrative connections <sup>3)</sup>			
	small scale users	medium scale users	large scale users	total	% metered	small scale users	medium scale users	large scale users	total
Wbgr	253,177	8,789	189	262,155	97	260,325	8,789	189	269,303
WMD	172,577	8,140	181	180,898	99	177,049	8,019	130	185,198
Vitens	1,482,390	73,874	827	1,557,091	100	1,522,742	74,026	829	1,597,597
PWN	623,364	19,278	112	642,754	100	680,970	19,278	112	700,360
GWA	159,333	19,580	435	179,348	23	445,828	18,898	633	465,359
WRK	-	-	-	-	-	-	-	-	-
DZH	340,439	16,595	157	357,191	100	541,699	25,567	230	567,496
WBE	460,764	20,253	573	481,590	83	716,808	20,253	573	737,634
Hydron-ZH	288,339	10,085	110	298,534	100	304,720	10,085	110	314,915
Hydron-Fl	111,400	6,600	186	118,186	100	108,496	6,456	186	115,138
Hydron-MN	448,443	23,539	315	472,297	99	506,373	23,827	314	530,514
DELTA	206,157	909	155	207,221	99	216,341	909	155	217,405
Brabant Water	799,647	41,712	548	841,907	99	887,173	41,712	548	929,433
TWM	69,250	2,539	60	71,849	100	87,303	2,628	60	89,991
WBB	-	-	-	-	-	-	-	-	-
WML	444,350	17,374	226	461,950	100	492,859	17,580	226	510,665
<b>The Netherlands</b>	<b>5,859,630</b>	<b>269,267</b>	<b>4,074</b>	<b>6,132,971</b>	<b>96</b>	<b>6,948,686</b>	<b>278,027</b>	<b>4,295</b>	<b>7,231,008</b>

<sup>1)</sup> Small scale consumers use less than 300 m<sup>3</sup>/year, medium scale consumers between 300 and 10,000 m<sup>3</sup>/year and large scale consumers more than 10,000 m<sup>3</sup>/year.  
<sup>2)</sup> A technical connection consists of the distribution pipe between the mains network and the end user, including water metre (if present).  
<sup>3)</sup> An administrative connection is taken to mean a premises related to the technical connection (e.g. an apartment). A collective (technical) connection includes several administrative connections.

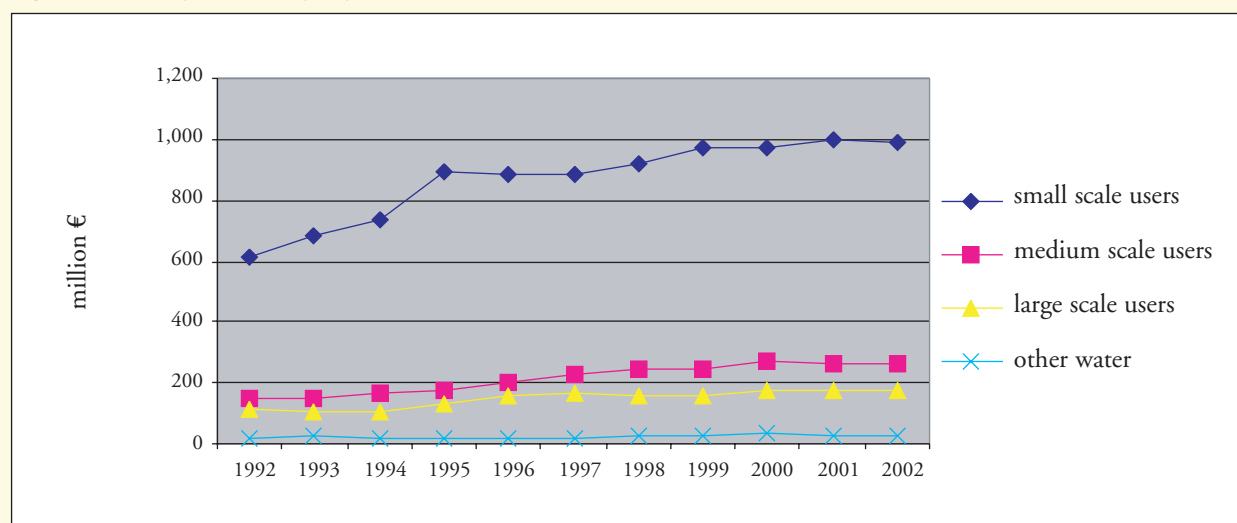
Table 6 Sales of drinking water 2002 <sup>1)</sup>

company	supply				income			
	small scale market	medium scale market	large scale market <sup>2)</sup>	total	small scale market	medium scale market	large scale market <sup>2)</sup>	total
	1000 m <sup>3</sup>				1000 €			
Wbgr	24,789	8,840	12,525	46,153	24,558	8,591	8,817	41,966
WMD	19,511	6,264	4,899	30,674	27,219	3,000	2,543	32,762
Vitens	152,559	65,101	28,965	246,625	194,985	76,016	31,761	302,761
PWN	68,689	23,662	8,421	100,772	121,579	33,861	11,403	166,843
GWA	49,381	10,127	30,604	90,112	65,083	12,644	21,401	99,128
WRK	-	-	-	-	-	-	-	-
DZH	43,247	19,847	11,009	74,103	82,530	26,004	12,101	120,636
WBE	82,050	8,315	46,646	137,011	116,983	9,072	37,081	163,136
Hydron-ZH	33,874	4,118	9,105	47,097	63,781	5,392	7,219	76,392
Hydron-Fl	11,176	3,208	3,620	18,004	15,465	3,491	2,657	21,612
Hydron-MN	45,649	21,070	8,344	75,062	53,463	22,432	8,527	84,422
DELTA	26,011	1,740	11,402	39,154	35,280	2,411	6,784	44,475
Brabant Water	94,188	33,969	32,108	160,265	109,430	37,528	26,445	173,403
TWM	9,068	1,924	2,176	13,168	7,797	1,654	1,467	10,918
WBB	-	-	-	-	-	-	-	-
WML	48,333	16,937	8,842	74,112	72,034	22,988	12,001	107,023
<b>the Netherlands</b>	<b>708,524</b>	<b>225,122</b>	<b>218,666</b>	<b>1,152,311</b>	<b>990,188</b>	<b>265,083</b>	<b>190,207</b>	<b>1,445,478</b>
<i>of which</i>								
<i>wholesale</i>			38,067	38,067			18,489	18,489
<i>export</i>			3,705	3,705			.	.
<i>final sale</i>	708,524	225,122	176,894	1,110,540	990,188	265,083	171,717	1,426,988

<sup>1)</sup> Small scale consumers use less than 300m<sup>3</sup>/year, medium scale consumers between 300 and 10,000 m<sup>3</sup>/year and large scale consumers more than 10,000 m<sup>3</sup>/year.

<sup>2)</sup> Including industrial process water of drinking water quality. The individual details shown in this table further include *wholesale sales* and exports. The total figure at the bottom of the table for the whole of the Netherlands is split into final sales to large scale users, *wholesale sales* and exports.

Figure 8 Income from delivery to final users 1992 - 2002

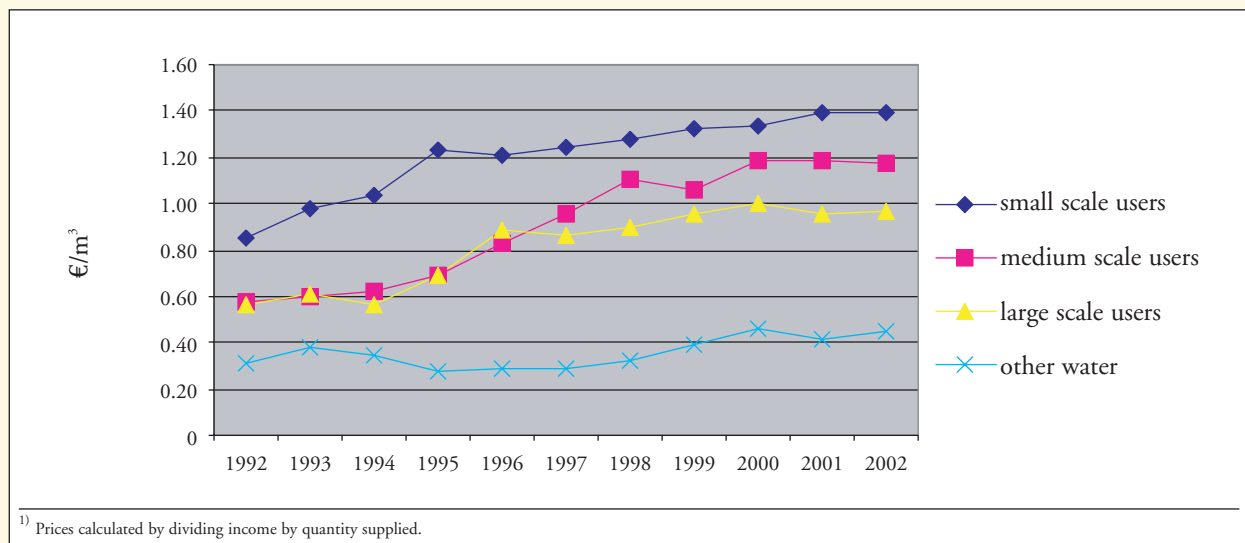


Since the introduction of the VEWIN benchmark (reference year 1997, € 1.12/m<sup>3</sup>) the average drinking water price increased less (+14%) than the consumer price index (+ 15%). Compared with 2001 the average drinking water price remained unchanged.

~ Rates

Table 7 shows for each water company the drinking water rate in 2002 for domestic use. The rates have been copied from the VEWIN publication *Overview of water charges on 1 January 2002* (Tarievenoverzicht leidingwater per 1 januari 2002). The outcome in the total column was calculated using the standing charges and the volumetric rate, indicating the average drinking water price per m<sup>3</sup> for a standard family (2.29 individuals) at average consumption (46 m<sup>3</sup>/individual/year). The formula used for calculation can be found in the table footnote.

Figure 9 Price development 1992 - 2002<sup>1)</sup>



~ Breakdown domestic drinking water consumption

Every three years VEWIN has research carried out among the Dutch population on the amount and application of domestic water consumption. Table 8 shows us the main outcomes of the last research which was held in 2001.

The main uses of domestic drinking water are the shower (33%), the toilet (28%) and the washing machine (18%). Domestic water consumption per head per day between 1992 and 2001 dropped from 135.0 to 126.2 litres. This drop is expected to continue, inter alia because of the further sale of low-water-use toilets and washing machines. While per capita use is declining, total domestic use is stable due to the ongoing growth of the population.

Table 7 Rates of drinking water to households 2002 <sup>1)</sup>

company	standing charge	volumetric rate	total per m <sup>3</sup>
	€		
Wbgr			
Province	26.10	0.87 <sup>2)</sup>	0.89
City	37.30	1.38 <sup>3)</sup>	1.41
WMD	31.30	0.86	1.16
Vitens			
Friesland	30.00	1.10	1.39
Overijssel	14.40	1.19	1.33
Gelderland			
Arnhem, Nijmegen, Apeldoorn etc. <sup>4)</sup>	30.00	0.90	1.18
Other municipalities <sup>5)</sup>	15.72	1.12	1.27
PWN			
General	40.66	1.35	1.74
Haarlem, Bloemendaal, Zandvoort and Velsen	41.66	1.45	1.84
GWA			
General	39.48	1.28	1.65
Heemstede	39.00	1.26	1.63
Amstelveen	7.90	1.28	1.35
Ouder-Amstel	39.48	1.28	1.65
DZH			
General	45.20	1.32	1.75
Den Haag	60.08	1.32	1.89
Leiden	61.54	1.32	1.90
Warmond	52.37	1.32	1.82
Rijnwoude	49.92	1.32	1.79
Voorburg	49.85	1.32	1.79
WBE			
General	62.16	0.97	1.56
Delft	51.72	1.11	1.60
Westland	55.16	0.97	1.49
Hydron-ZH	62.60	1.26	1.85
Hydron-Fl	-	1.22	1.22
Hydron-MN	22.92	0.94	1.16
DELTA			
General	42.12	1.05	1.45
Putte, Ossedrecht, Woensdrecht etc.	38.40	0.84	1.20
Brabant Water			
General	38.40	0.84	1.20
Helmond and Mierlo	38.40	0.89	1.25
Baarle Hertog	38.40	1.20 <sup>6)</sup>	1.17
TWM			
Tilburg	28.92	0.85	1.12
Goirle	28.92	0.83	1.10
WML			
General	15.90	1.36	1.51
Maastricht	19.06	1.36	1.54

<sup>1)</sup> Metered houses. Exclusive 6% VAT and water tax (€ 0.136/m<sup>3</sup>), including groundwater tax. Standing charges include distribution and concession reimbursements. The total price per m<sup>3</sup> is calculated from the standing charge and the volumetric rate for an average family of 2.29 individuals (CBS, 2002) and average consumption per individual of 46 m<sup>3</sup> a year (VEWIN/NIPO, 2001). Calculation: (standing charge + 2.29 x 46 x volumetric rate) / (2.29 x 46).

<sup>2)</sup> Up to 28 m<sup>3</sup> per connection nil, more than 28 m<sup>3</sup> € 0.87.

<sup>3)</sup> Up to 25 m<sup>3</sup> per connection nil, more than 25 m<sup>3</sup> € 1.38.

<sup>4)</sup> The supply area of former water company NUON Water Gelderland.

<sup>5)</sup> The supply area of former water company Waterbedrijf Gelderland.

<sup>6)</sup> Up to 15 m<sup>3</sup> per individual nil, more than 15 m<sup>3</sup> € 1.20.

Table 8 Breakdown of domestic water consumption 1992 - 2001

	1992	1995	1998	2001
	<i>litres/person, day</i>			
bath	8.0	9.0	6.7	3.7
shower	39.5	38.3	39.7	42.0
washbasin	3.7	4.2	5.1	5.2
toilet flush	42.7	39.0	36.2	34.8
washing, by hand	2.5	2.1	2.1	1.8
washing, by machine	23.2	25.5	23.2	22.8
washing up, by hand	8.8	4.9	3.8	3.6
washing up, by machine	0.7	0.9	1.9	2.4
food preparation	2.6	2.0	1.7	1.6
drinking coffee, thea and water	.	1.5	1.5	1.5
other	3.3	6.7	6.1	6.7
<b>total</b>	135.0	134.1	127.9	126.2

Source: report on domestic water consumption by VEWIN/NIPO 2001.

## Chapter 4 Financial data

Chapter 3 deals at length with water sales. This chapter discusses the financial balance sheet, investments and taxes.

### ~ Financial balance sheet

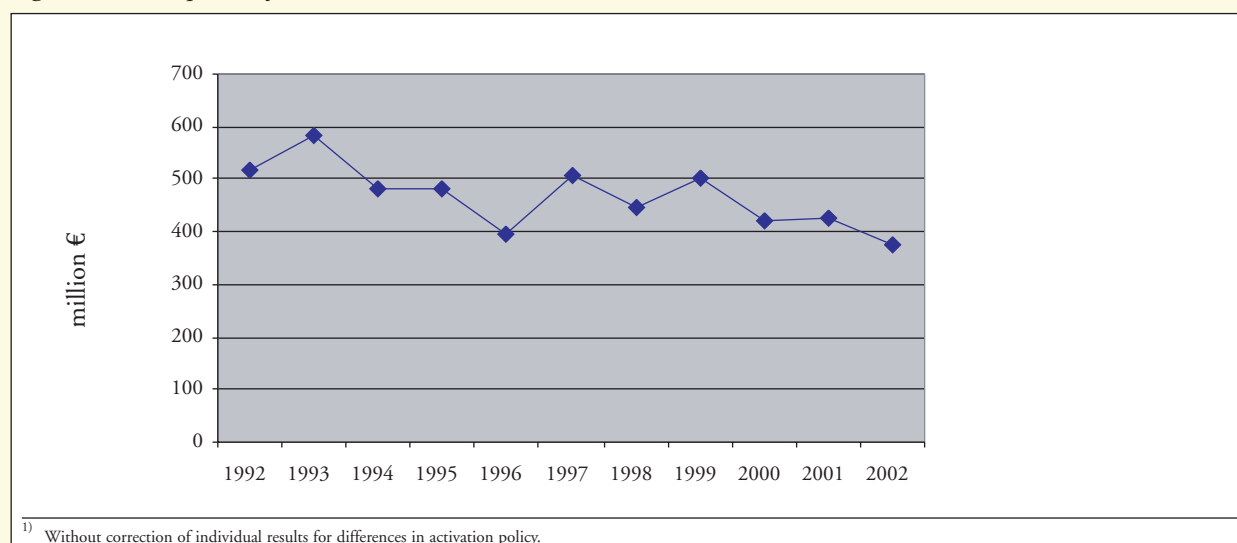
Table 9 shows the financial balance sheet of the water sector. The balance was created by aggregating the individual figures of the companies, most of which was valued at historical cost price.

The total balance sheet assets at the end of 2002 were € 5.7 billion, of which € 1.4 billion (24.9%) was financed with own capital, € 3.7 billion (64.8%) with loan capital and € 0.6 billion (10.3%) with other capital (contributions from third parties and contingencies).

Table 9 Financial balance sheet on 31-12-2002 (million €)

Assets		Liabilities	
<i>fixed assets</i>		<i>shareholders' equity</i>	
- tangible fixed assets	5,243	- share capital	117
- intangible fixed assets	48	- reserves	1,303
- financial fixed assets	105	<i>other capital</i>	
- total	5,395	- contributions from third parties	442
		- contingencies	147
<i>current assets</i>		<i>long-term loan capital</i>	
- stocks	24		2,829
- account receivables/debtors	295	<i>short-term loan capital</i>	
- liquid assets/cash	-5	- loans	479
- total	314	- creditors	145
		- advances	23
		- other	224
		- total	871
<b>total</b>	<b>5,709</b>	<b>total</b>	<b>5,709</b>

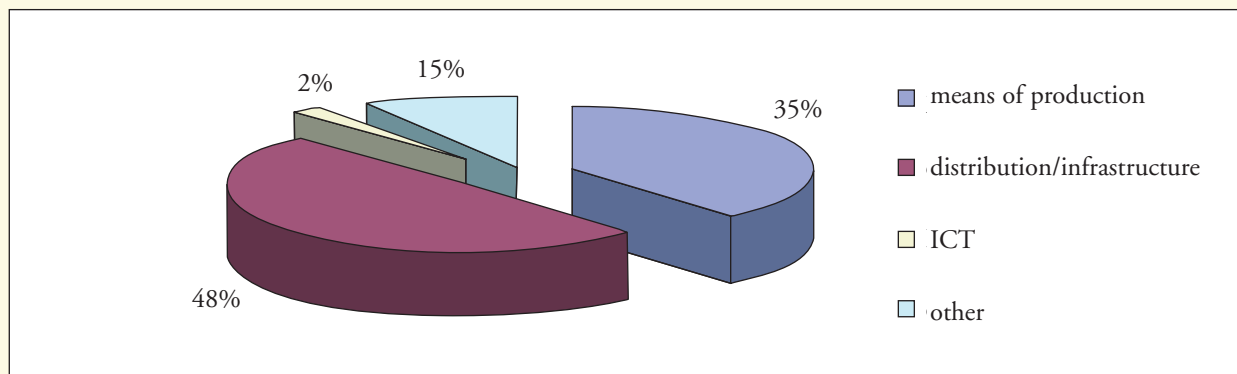
Figure 10 Development of investments 1992 - 2002 <sup>1)</sup>



~ *Investments*

Water companies' investment levels, as shown in figure 10, are declining. In 1992 investments amounted to 519 million euro, as against 374 million euro in 2002 (-28%). In 2002 48% of this was invested in distribution processes, 35% in production processes and 2% in information and communications technology.

Figure 11 Investments by process 2002



~ *Taxes*

Table 10 shows the development in rates of the national ground water tax and the tap water tax. Both taxes are based on the Environmental Resource Tax Act (Wet Belastingen op Milieugrondslag). The table does not include the provincial groundwater levies on the basis of the Ground Water Act (Grondwaterwet) and the distribution and concession reimbursements. The provincial groundwater levies vary per province whereas distribution and concession reimbursements vary per municipality. The latter are only levied in a limited number of municipalities.

Table 10 Water tax rates under the Water Resource Tax Act, 1995 - 2002

	1995 - 1998	1999	2000	2001	2002
	<i>euro-cent/m<sup>3</sup></i>				
<i>groundwater tax</i>					
normal rate	15.4	15.8	16.0	16.31	16.82
infiltration discount <sup>1)</sup>	12.7	13.2	13.4	13.67	14.09
<i>tap water tax</i> <sup>2)</sup>			12.9	13.2	13.6

<sup>1)</sup> Discount on normal rate with prior infiltration (Water Resource Tax Act, article 6).  
<sup>2)</sup> Tax on drinking water and *other water* that is supplied through a water network to third parties. The tax only applies to the delivery of the first 300 m<sup>3</sup>.

The average tax load resulting from the provincial groundwater levies and the distribution and concession reimbursements is determined by dividing the paid tax amounts by the total drinking water supplied to final users (1,111 million m<sup>3</sup>, see table 4). Table 11 shows the outcomes of this, along with other taxes.

Allocated over the total drinking water supply the provincial groundwater levy amounts to 1.0 eurocent/m<sup>3</sup>; distribution and concession reimbursements to 0.7 eurocent/m<sup>3</sup>. Allocated over drinking water from groundwater or infiltrated water (together almost 70% of total drinking water supply) average tax load of the provincial groundwater levy amounts to 1.4 eurocent/m<sup>3</sup>.

In 2002, the total tax load was € 358 million (table 11), of which € 350 million was allocated to drinking water, that is € 0.32 per m<sup>3</sup>.

The drinking water taxes include € 150 million (€ 0.14/m<sup>3</sup>) from cost-price increasing taxes and € 200 million (€ 0.18/m<sup>3</sup>) from tap water tax and V.A.T.. Tap water tax and V.A.T. are collected from consumers by the drinking water companies on behalf of the government. Though consumers must pay these taxes to the water company (on top of the price charged by the water company), they are not part of companies' turnover.

Table 11 Taxes 2002

	total levy	drinking water share <sup>1)</sup>	
		levy	levy per m <sup>3</sup> <sup>2)</sup>
	million €		€/m <sup>3</sup>
<b>direct taxes (cost-price increasing)</b>			
national groundwater tax	137	132	0.12
provincial groundwater levy	11	11	0.01
distribution and concession reimbursements	8	8	0.01
<b>total</b>	<b>156</b>	<b>150</b>	<b>0.14</b>
<b>indirect taxes</b>			
tap water tax <sup>3)</sup>	108	108	0.10
VAT on water sales <sup>4)</sup>	87	86	0.08
VAT on tap water tax <sup>5)</sup>	6	6	0.01
<b>total</b>	<b>202</b>	<b>200</b>	<b>0.18</b>
<b>total</b>	<b>358</b>	<b>350</b>	<b>0.32</b>

<sup>1)</sup> The drinking water share has been calculated. On calculation of the direct taxes the outcomes of the 2002 benchmark were used, which differentiates drinking water activities and non-drinking water activities. The share of drinking water activities in taxes amounts to 96.1% for the national groundwater tax, 95.0 % for the provincial groundwater levy and 99.7% for piping and concession reimbursements. The calculation of the indirect taxes is shown in footnotes 3 to 5.

<sup>2)</sup> The drinking water levy calculated in the previous column divided by the drinking water supplied to final users (1,111 million m<sup>3</sup>).

<sup>3)</sup> Levy estimated as follows: supply of small scale drinking water x rate for tap water tax (€ 0.136 / m<sup>3</sup>) + medium scale and large scale administrative connections for drinking water x 300 m<sup>3</sup> x rate for tap water tax + (in the total column) supply of other water for domestic use x rate for tap water tax + (in the total column) non-domestic connections for other water x 300 m<sup>3</sup> x rate for tap water tax.

<sup>4)</sup> Calculated as follows: income from water delivered to final users x 6%, respectively income from drinking water delivered to final users x 6%.

<sup>5)</sup> Calculated as follows: previously calculated tax on tap water x 6% (VAT is also levied over tax on tap water).

Table 12 Average drinking water price in the Netherlands 2002

	€/m <sup>3</sup>	share in total price
reimbursement for the water company	1.14	78.1%
cost-price increasing taxes	0.14	9.6%
<i>average tariff</i>	<u>1.28</u>	
tap water tax and VAT	0.18	12.3%
<i>total amount due for average buyer</i>	<u>1.46</u>	

Table 12 shows the effect of taxes on the average Dutch drinking water price. According to this table approximately 10% of the average rate consists of taxes; of the total price (thus including VAT and tap water taxes) no less than 22%.

Table 13 represents the build-up of the average drinking water price for the small scale sector only. Small scale consumers (sales < 300 m<sup>3</sup>) pay tap water taxes on the entire consumption, as a result of which the tax pressure for this consumption group (0.37 euro per m<sup>3</sup>) slightly exceeds the average tax pressure of all consumer groups in the Netherlands (0.32 euro per m<sup>3</sup>) together.

Table 13 Average drinking water price for small scale consumers 2002

	<u>€/m<sup>3</sup></u>	<u>share in total price</u>
reimbursement for the water company	1.26	77.3%
cost-price increasing taxes	<u>0.14</u>	8.6%
average tariff	1.40	
tap water tax and VAT <sup>1)</sup>	<u>0.23</u>	14.1%
<i>total amount due for average buyer</i>	<u>1.63</u>	

<sup>1)</sup> € 0.136 + 6% VAT x (€ 1.40 + € 0.136)

## Chapter 5 Infrastructure

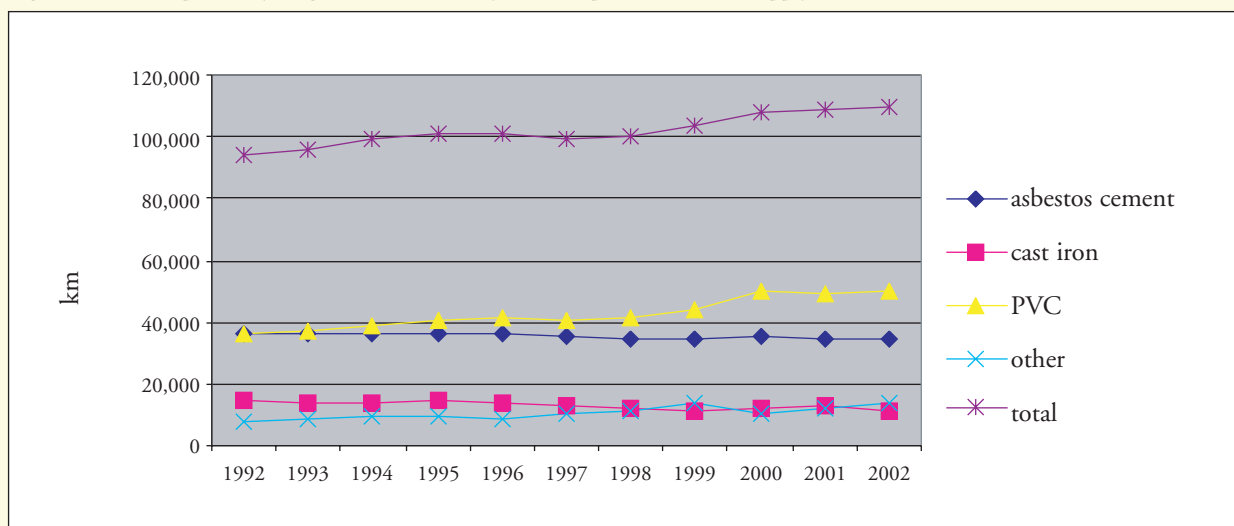
Table 14 gives an overview of the length and structure of the transport and mains supply network as on 31 December 2002. The development of the network length and the most applicable materials asbestos cement, PVC and cast iron are shown in figure 12. In this figure all other materials are referred to under 'other'.

Table 14 Length and structure of the transport and mains supply network on 31-12-2002 <sup>1)</sup>

company	total	asbestos cement	cast iron	nodular cast iron	steel	concrete	PVC	poly- ethene (PE)	glass fibre reinforced synthetics	other
<i>kilometre</i>										
Wbgr	4,655	1,461	771	-	106	17	-	2,300	-	-
WMD	4,120	1,517	243	-	-	-	2,327	-	-	33
Vitens	35,017	8,274	3,276	30	124	27	22,542	577	-	168
PWN	9,519	4,701	1,025	434	153	196	1,769	1,217	21	3
GWA	2,670	54	785	402	63	188	843	181	3	151
WRK	332	-	-	-	-	332	-	-	-	-
DZH	4,318	799	975	138	31	89	1,684	285	-	317
WBE	6,286	942	342	12	452	26	3,894	537	-	81
Hydron-ZH	3,914	463	229	62	189	2	2,320	557	1	92
Hydron-Fl	2,209	492	-	-	6	-	1,621	88	-	2
Hydron-MN	6,204	1,782	1,162	8	34	39	2,544	607	2	26
DELTA	4,474	2,321	157	13	135	38	1,721	87	1	1
Brabant Water	16,505	7,120	1,360	12	102	44	7,689	132	2	44
TWM	808	124	293	58	3	-	321	2	6	1
WBB	25	-	-	-	18	7	-	-	-	-
WML	8,310	4,185	456	1,425	1,130	-	840	63	-	211
<b>The Netherlands</b>	<b>109,366</b>	<b>34,234</b>	<b>11,073</b>	<b>2,594</b>	<b>2,545</b>	<b>1,005</b>	<b>50,115</b>	<b>6,633</b>	<b>36</b>	<b>1,130</b>

<sup>1)</sup> Diameter > 50 mm external, PVC and PE > 63 mm external.

Figure 12 Development of length and structure of the transport and mains supply network 1992-2002



# Appendix 1

## VEWIN PUBLICATIONS

	price non-members	price members
<b>Statistics</b>		
Water in Zicht, Bedrijfsvergelijking in de Drinkwatersector (benchmark report) <sup>1)</sup>	€ 27.20	€ 0.00
Reflections on Performance 2000; Benchmarking in the Dutch Drinking Water Industry (www.vewin.nl) <sup>1)</sup>	€ 6.80	€ 2.30
CD-ROM Statistiek Waterkwaliteit (water quality statistics) <sup>2)</sup>	€ 135.60	€ 36.80
Tarievenoverzicht leidingwater (overview of water charges) <sup>1)</sup>	€ 12.00	€ 0.00
<b>Other</b>		
Jaarboek voor de Waterleiding in Nederland (water supply yearbook) <sup>1)</sup>	€ 25.00	€ 12.50
Wegwijzer Waterkwaliteit (guide to water quality) <sup>1)</sup>	€ 56.70	€ 38.60
140 jaar Drinkwaterleiding in Nederland (1853-1993) (140 years of drinking water in the Netherlands) <sup>1)</sup>	€ 13.60	€ 11.35
All about Dutch drinking water <sup>1)</sup>	€ 6.80	€ 3.40

<sup>1)</sup> Including 6% VAT

<sup>2)</sup> Including 19% VAT

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Private individuals can order by transferring the relevant amount to Giro account number 461934 in the name of VEWIN in Rijswijk, stating the publications desired. The order will be sent to the address on the transfer form. For payments through telebanking or bank a delivery address is required.

# Appendix 2

## SUPPLY AREAS AND RELATED MUNICIPALITIES 2002

### Waterbedrijf Groningen

All Groningen municipalities and the municipality of Tynaarlo (Eelde-Paterswolde).

### Waterleidingmaatschappij Drenthe

Aa and Hunze, Assen, Borger-Odoorn, Coevorden, De Wolden, Emmen, Hoogeveen, Midden-Drenthe, Noorderveld, Westerveld (partly) and Tynaarlo (partly).

Supplies to a number of areas in Hoogezand-Sappemeer, Leek, Meppel, Onstwedde and Oost-stellingwerf.

### Vitens

#### ~ *Friesland*

All Friesland municipalities.

#### ~ *Overijssel*

Almelo, Bathmen, Borne, Dalfsen, Denekamp, Deventer, Diepenveen, Enschede, Hardenberg, Havelte, Hellendoorn, Hengelo (O), Hof van Twente, Kampen, Losser, Meppel, Noorootpolder, Oldenzaal, Olst, Ommen, Raalte, Rijssen, Staphorst, Steenwijk, Tubbergen, Urk, Vriezenveen, Wierden, Zwartewaterland and Zwolle.

#### ~ *Gelderland*

Aalten, Angerlo, Apeldoorn, Arnhem, Barneveld, Bemmelen, Bergh, Beuningen, Borculo, Buren, Culemborg, Didam, Dinxperlo, Dodewaard, Doesburg, Doetinchem, Druten, Duiven, Echteld, Ede, Eibergen, Elburg, Epe, Ermelo, Geldermalsen, Gendringen, Gorssel, Groenlo, Groesbeek, Haaksbergen, Harderwijk, Hattem, Heerde, Hengelo (Gld), Heumen, Hummelo and Keppel, Kesteren, Lichtenvoorde, Lingewaal, Lochem, Maasdriel, Millingen aan de Rijn, Neede, Nerijnen, Nijmegen, Nijkerk, Nunspeet, Oldebroek, Overbetuwe, Putten, Renkum, Rheden, Rijnwaarden, Rozendaal, Ruurlo, Steenderen, Tiel, Ubbergen, Voorst, Vorden, Warnsveld, Wehl, West-Maas and Waal, Wageningen, Westervoort, Wijchen, Winterswijk, Wisch, Zaltbommel, Zelhem, Zevenaar, and Zutphen.

### PWN Waterleidingbedrijf Noord-Holland

Akersloot, Alkmaar, Amstelveen (partly), Andijk, Anna Palowna, Beemster, Bennebroek, Bergen NH), Beverwijk, Blaricum, Bloemendaal, Bussum, Castricum, Drechterland, Edam-Volendam, Enkhuizen, Graft-de Rijk, 's-Graveland, Haarlem, Haarlemmerliede c.a., Haarlemmermeer, Harenkarspel, Heemskerk, Heerhugowaard, Heiloo, Den Helder, Hoorn, Huizen, Landsmeer, Langedijk, Laren, Limmen, Medemblik, Naarden, Nederhorst den Berg, Niedorp, Noorder-Koggenland, Obdam, Oostzaan, Opmeer, Purmerend, Schagen, Schermer, Schoorl, Stede Broec, Texel, Uitgeest, Uithoorn, Velsen, Venhuizen, Waterland, Weesp, Wervershoof, Wester-Koggenland, Wieringen, Wieringermeer, Wognum, Wormerland, Zaanstad, Zandvoort, Zeevang, Zijpe. Supplies to a number of areas in the municipalities of Alkemade, Amsterdam, Eemnes, Heemstede, Hillegom, Hilversum, Leimuider, Loos-drecht, Muiden and Warmond.

### Gemeentewaterleidingen Amsterdam

Amstelveen, Amsterdam, Diemen, Heemstede, Muiden and Ouder-Amstel. Supplies to areas in a number of surrounding municipalities.

## Duinwaterbedrijf Zuid-Holland

Bergschenhoek, Berkel and Rodenrijs, Bleiswijk, 's-Gravenhage, Hillegom, Katwijk, Leiden, Leidschendam, Lisse, Nieuwerkerk a/d IJssel, Noordwijk, Noordwijkerhout, Nootdorp, Oegstgeest, Pijnacker, Rijnsburg, Rijnwoude, Rijswijk, Sassenheim, Valkenburg, Voorburg, Voorhout, Voorschoten, Warmond, Wassenaar, Zevenhuizen-Moerkapelle and Zoetermeer.

## Waterbedrijf Europoort

Albrandswaard, Barendrecht, Bernisse, Binnenmaas, Brielle, Capelle a/d IJssel, Cromstrijen, De Lier, Delft, Dordrecht, 's-Gravendeel, 's-Graven-zande, Heerjansdam, Hellevoetsluis, Korendijk, Maasland, Maassluis, Monster, Naaldwijk, Oud-Beijerland, Rotterdam, Rozenburg, Schiedam, Schipluiden, Spijkenisse, Strijen, Vlaardingen, Wateringen and Westvoorne.

## Hydron Zuid-Holland

Alblasserdam, Alkemade, Alphen a.d. Rijn, Bergambacht, Bodegraven, Boskoop, Giessenlanden, Gorinchem, Gouda, Hardinxveld-Giessendam, Graafstroom, Hendrik Ido Ambacht, Jacobswoude, Krimpen a.d. IJssel, Leerdam, Leiderdorp, Liemeer, Liesveld, Moordrecht, Nederlek, Nieuw-Lekkerland, Nieuwkoop, Ouderkerk, Papendrecht, Reeuwijk, Ridderkerk, Rijnwoude, Schoonhoven, Sliedrecht, Ter Aar, Vianen, Vlist, Waddinxveen, Zederik, Zoeterwoude and Zwijndrecht.

## Hydron Flevoland

Almere, Dronten, Lelystad and Zeewolde.

## Hydron Midden-Nederland

Abcoude, Amerongen, Amersfoort, Baarn, De Bilt, Breukelen, Bunnik, Bunschoten, De Ronde Venen, Driebergen-Rijsenburg, Eemnes, Hilversum, Houten, Leersum, Leusden, Loenen, Loosdrecht (municipality De Wijde Meren), Lopik, Maarn, Maarssen, Montfoort, Nieuwegein, Oudewater, Renswoude, Rhenen, Scherpenzeel, Soest, Utrecht, Veenendaal, Woerden, Woudenberg, Wijk bij Duurstede, IJsselstein and Zeist. Supplies to a number of areas in Kortenhoef.

## Bronwaterleiding Doorn

Doorn.

## Delta NV

Axel, Bergen op Zoom (Halsteren), Borsele, Goes, Hontenisse, Hulst, Kapelle, Middelburg, Middelharnis, Noord-Beveland, Oostburg, Oostflakkee, Reimerswaal, Sas van Gent, Schouwen-Duiveland, Sluis-Aardenburg, Terneuzen, Tholen, Veere, Vlissingen and Woensdrecht.

## Brabant Water

Aalburg, Alphen-Chaam, Asten, Baarle-Hertog, Baarle-Nassau, Bergen op Zoom, Bergeyk, Bernheze, Best, Bladel, Boekel, Boxmeer, Boxtel, Breda, Cranendonck, Cuyk, Deurne, Dongen, Drimmelen, Eersel, Eindhoven, Etten-Leur, Geertruidenberg, Geldrop, Gemert-Bakel, Gilze and Rijen, Goirle (partly), Grave, Haaren, Halderberge, Heeze-Leende, Helmond, 's-Hertogenbosch, Heusden, Hilvarenbeek, Laarbeek, Landerd, Lith, Loon op Zand, Maasdonk, Mierlo, Mill en Sint Hubert, Moerdijk, Nuenen, Oirschot, Oisterwijk, Oosterhout, Oss, Ravenstein, Reusel-de Mierden, Roosendaal, Rucphen, Schijndel, Someren, Son en Breugel, Steenbergen, St. Antonis, St. Michielsgestel, St. Oedenrode, Tholen (partly), Tilburg, Uden, Valkenswaard, Veghel, Veldhoven, Vught, Waalre, Waalwijk, Werkendam, Woensdrecht (partly), Woudrichem and Zundert. Supplies to a number of areas in Nederweert and Belgium.

## Tilburgsche Waterleiding-Maatschappij

Tilburg and Goirle. Supplies to a number of areas in Hilvarenbeek.

## Waterleidingmaatschappij Limburg

Ambt Montfort, Arcen and Velden, Beek, Beesel, Bergen (L), Born, Brunssum, Echt, Eijsden, Gennep, Grubbenvorst, Gulpen/Wittem, Haelen, Heel, Heerlen, Helden, Heythuysen, Horst aan de Maas, Hunsel, Kerkrade, Kessel, Landgraaf, Maasbracht, Maasbree, Maastricht, Margraten, Meerlo-Wanssum, Meerssen, Meijel, Mook and Middelaar, Nederweert, Nuth, Onderbanken, Roerdalen, Roermond, Roggel en Neer, Schinnen, Sevenum, Simpelveld, Sittard-Geleen, Stein, Stramproy/Weert, Susteren, Swalmen, Thorn, Vaals, Valkenburg a.d. Geul, Venlo, Venray, Voerendaal and Weert.

# Appendix 3

## EXPLANATION OF SIGNS AND DEFINITIONS

### Signs

- . = data are missing
- 0 = the figure is less than half the chosen unit
- = nil
- nothing (blank) = data not available for logical reasons

### Definitions

~ *Water company*

- a. a company (partially) destined for public drinking water facilities by providing drinking water for consumers;
- b. a company (partially) destined to deliver wholesale drinking water on large scale to companies as referred to under a;
- c. a company, destined for public drinking water facilities by providing drinking water for consumers, and for delivery of wholesale drinking water to companies as referred to under a.

~ *drinking water*

Water (partially) destined for human use.

~ *other water*

Water not having the quality of drinking water. For instance, non-filtered and semi-filtered water as well as distilled and demineralised.

~ *supply area*

The municipality(ies) and/or part(s) of the municipality(ies), where a water company delivers and invoices water.

~ *production/produced*

The amount of water pumped by one or more purification stations into the pipeline.

~ *wholesale delivery*

Mutual delivery between water companies, or inter-company deliveries.

~ *third parties*

Company or institution not being a water company.

~ *natural dune water*

This is groundwater naturally present in the dunes. Water supplied by man from external sources (artificial infiltration) is not considered natural dune water.

~ *artificial infiltration*

Feeding water into a so-called infiltration area where the water sinks through the soil. After a certain period the water, partially purified by its passage through the soil, is pumped up to be processed into drinking water. A special form of artificial infiltration is depth infiltration, whereby the water does not sink through the soil, but is simply pumped directly deep underground.

- ~ *direct processing*  
Production of water without previous artificial infiltration.
- ~ *river groundwater*  
Water that is extracted from ground that is physically close to open water or a river and besides groundwater, consists of at least 10% infiltrated surface water.
- ~ *technical connection*  
A technical connection consists of the pipe between the mains network and the consumer, including water metre (if present).
- ~ *administrative connection*  
An administrative connection is taken to mean a premises related to a technical connection (e.g. an apartment). A collective (technical) connection includes several administrative connections.
- ~ *mains supply network*  
The water network to which the connection pipes of consumers are connected.
- ~ *transport network*  
The water network through which drinking water or *other water* flows, except the mains supply network and consumer connection pipes. This concerns the pipelines for bringing water into the purification stations, pipelines between water companies (wholesale deliveries) and those between purification stations and the mains supply network.
- ~ *small scale users*  
Consumers who use less than 300 m<sup>3</sup> a year.
- ~ *medium scale users*  
Consumers who use between 300 m<sup>3</sup> and 10,000 m<sup>3</sup> a year.
- ~ *large scale users*  
Consumers who use more than 10,000 m<sup>3</sup> a year.

# Appendix 4

## LITERATURE

1. VEWIN, Water Supply Statistics 1992-2001 (1993-2002).
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