



THE NETHERLANDS WATERWORKS ASSOCIATION (VEWIN)

Water Supply Statistics 2000



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The Netherlands Waterworks Association (VEWIN)

January 2002

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Introduction

Objective

Water Supply Statistics is an annual VEWIN publication. It presents data used by the sector as basic information for policy purposes and for the provision of information to third parties such as ministries, the European Union, companies, institutions and consumers.

Collecting the data

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

Since 2000, to relieve water companies of some of the administrative load, data for the 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 the 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 on 1 January 2000* (Tarievenoverzicht leidingwater per 1 januari 2000) and the overview of the breakdown of domestic water consumption (table 8) comes from the VEWIN/NIPO report *Dutch people use less water* (Nederland gaat zuiniger met water om) of January 1999.

Structure of the publication

Not only are data now gathered in a different way, the publication also has a new face. What is new includes the rates overview, the overview of the components of the domestic water consumption, the water balance and a paragraph on taxes. The water balance includes the amounts of water collected, produced and supplied by water companies from source to tap. The section about taxes meets the need for information about direct and indirect water taxes.

Some data of less importance have disappeared. They include provincial results, the classification of investments according to type (buildings, installations, etc.) and other sources of income than water sales.

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 sheets, investments and taxes);
- *chapter 5*: infrastructure.

Water supply statistics available on internet

The water supply statistics are available on www.vewin.nl or www.waterleiding.nl.

Other VEWIN reports

Besides the *Water Supply Statistics 2000* the VEWIN produces other publications with information about water companies. A list of these can be found in appendix 1.

Summary overview

	1990	1995	1999	2000
General				
number of water companies	55	36	25	24
employment as full-time equivalents ¹⁾	8,422	7,893	7,052	6,803
drinking water connections (x 1,000) ²⁾	5,674	6,060	6,656	7,042
% metered	91	92	91	96
Production (million m³)				
<i>drinking water</i>				
own production	1,227	1,219	1,186	1,183
import balance and purchase from third parties	10	8	4	4
<i>other water</i>				
own production ³⁾	51	52	68	78
import balance and acquisition from third parties	6	11	6	7
Supply (million m³)				
<i>drinking water</i>				
small scale users (< 300m ³ / year)	713	726	737	741
medium scale users (300 - 10,000m ³ / year)	237	259	236	214
large scale users (> 10,000m ³ / year)	217	186	162	172
water not charged	70	56	56	54
<i>other water</i>				
domestic water	.	.	.	0.08
other applications ³⁾	57	62	74	85
Income from deliveries (million NLG)				
<i>drinking water</i>				
small scale users (< 300m ³ / year)	1,190	1,978	2,151	2,197
medium scale users (300 - 10,000m ³ / year)	292	392	548	552
large scale users (> 10,000m ³ / year)	155	284	341	374
<i>other water</i>				
domestic water	.	.	.	0.11
other applications	.	38	63	86
Income from deliveries (million €)				
<i>drinking water</i>				
small scale users (< 300m ³ / year)	540	898	976	997
medium scale users (300 - 10,000m ³ / year)	133	178	249	251
large scale users (> 10,000m ³ / year)	70	129	155	170
<i>other water</i>				
domestic water	.	.	.	0,05
other applications	.	17	29	39
Financial data				
investments (million NLG)	579	1,066	1,110	874
investments (million €)	263	484	504	397
taxes (million NLG) ⁴⁾	.	.	.	782
taxes (million €)	.	.	.	355

¹⁾ Full-time equivalents: number of employees on payroll calculated as people working full time.

²⁾ Since 2000 *administrative connections*, 1999 and earlier *technical connections*. The number of *technical connections* at the end of 2000 was 5,996 x 1000, which was 660,000 less than at the end of 1999.

Supposedly in 1999 and earlier many companies reported *administrative connections* while in fact *technical connections* had been called for. Definitions of *technical* and *administrative connections* are shown in table 1.

³⁾ Exclusive of the production/supply by a number of subsidiary companies (approximately 34 million m³ in 2000).

⁴⁾ Water taxes and local taxes (see table 11).

Chapter 1 The water companies

The water companies operating at the end of 2000 are shown in table 1. Figure 1 shows the relevant supply areas.

Almost all companies are limited liability companies with municipalities and provinces as shareholders. Exceptions to this are Gemeentewaterleidingen Amsterdam, a municipal company, and the private limited company BV Waterwinningsmaatschappij Oost-Veluwezooom, with the water companies NUON Water Gelderland and Waterbedrijf Gelderland as shareholders.

Watertransportmaatschappij Rijn-Kennemerland, Waterwinningsbedrijf Brabantse Biesbosch and Waterwinningsbedrijf Oost-Veluwezooom do not distribute drinking water and therefore have been shown in the table as production companies. NV Nutsbedrijf Amstelland, on the other hand, is a pure distribution company without having its own production facilities. It purchases its drinking water wholesale from other water companies. All other companies both produce and distribute drinking water.

Figure 2 shows the development in the number of employees working at the water companies in terms of full-time equivalents (fte). It shows that employment is declining in the sector. Employment by the water companies, excluding those associated with activities such as energy distribution, has dropped from 8,422 fte in 1990 to 6,803 fte in 2000. However, the companies also employed temporary personnel. Between 1997 and 2000 the number of externally sourced employees fluctuated between 470 to 639 fte.

Figure 1 Supply areas ¹⁾

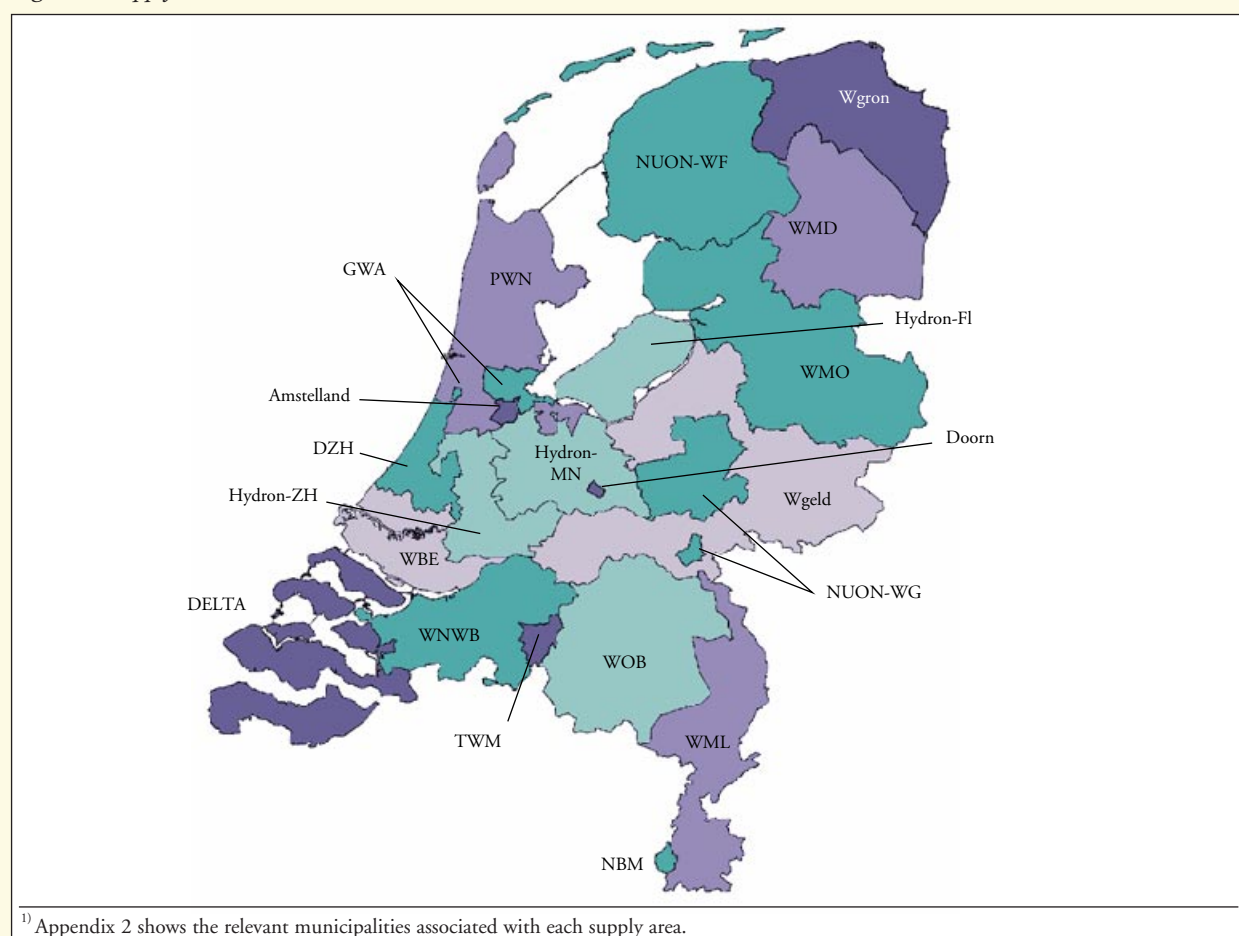


Table 1 Overview of the water companies on 31-12-2000 ¹⁾

Company	Code name	Legal form ²⁾	Nature ³⁾	Em- ployees (fte) ⁴⁾	Technical connect- ions ⁵⁾	Administra- tive connect- ions ⁶⁾	Inhabitants in supply area
<i>x1000</i>							
Waterbedrijf Groningen	Wgron	LLC	PD	226	258	267	566
NUON Water Fryslân	NUON-WF	LLC	PD	235	277	278	629
Waterleidingmaatschappij Drenthe	WMD	LLC	PD	173	180	189	444
Waterleiding Maatschappij Overijssel	WMO	LLC	PD	439	487	487	1,153
Waterbedrijf Gelderland	Wgeld	LLC	PD	411	511	511	1,288
NUON Water Gelderland	NUON-WG	LLC	PD	73	253	290	661
Waterwinningmaatschappij Oost-Veluwezoom	WOV	PLC	P	-	-	-	-
Hydron Midden-Nederland	Hydron-MN	LLC ⁷⁾	PD	519	434	509	1,210
Hydron Flevoland	Hydron-Fl	LLC ⁸⁾	PD	95	111	108	267
PWN Waterleidingbedrijf Noord-Holland	PWN	LLC	PD	824	626	683	1,570
Gemeentewaterleidingen Amsterdam	GWA	M	PD	655	151	420	793
Nutsbedrijf Amstelland	AMSTELLAND	LLC	D	27	27	42	90
Watertransportmaatschappij Rijn Kennemerland	WRK	LLC	M	113	-	-	-
Hydron Zuid-Holland	Hydron-ZH	LLC ⁹⁾	PD	281	295	313	757
Duinwaterbedrijf Zuid-Holland	DZH	LLC	PD	577	338	550	1,164
Waterbedrijf Europoort	WBE	LLC	PD	475	472	725	1,469
Delta Nutsbedrijven	DELTA	LLC	PD	221	215	202	422
Waterleiding Maatschappij Noord-West-Brabant	WNWB	LLC	PD	260	286	322	727
Tilburgsche Waterleiding-Maatschappij	TWM	LLC	PD	88	89	71	215
Waterleidingmaatschappij Oost-Brabant	WOB	LLC	PD	548	532	586	1,188
Waterwinningbedrijf Brabantse Biesbosch	WBB	LLC	P	62	-	-	-
Waterleidingmaatschappij Limburg	WML	LLC	PD	471	420	456	1,021
Nutsbedrijven Maastricht	NBM	LLC	PD	30	34	34	122
The Netherlands				6,803	5,996	7,042	15,755

¹⁾ 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 2.5 million m³.

²⁾ M = municipal company; LLC = limited liability company; PLC = private limited company.

³⁾ P = production company; D = distribution company; PD = production and distribution company.

⁴⁾ Full-time equivalents.

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

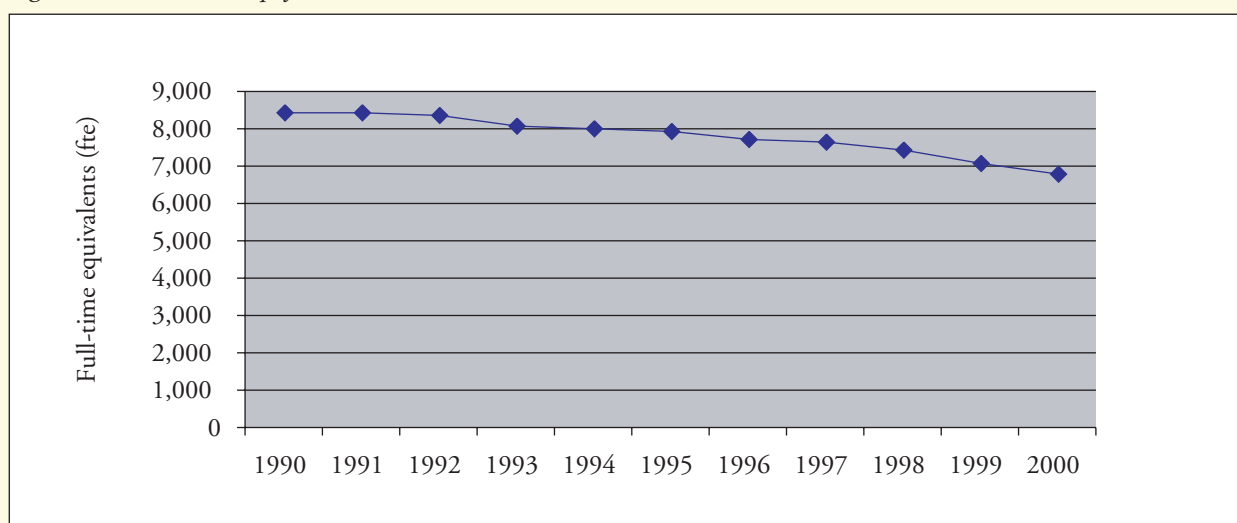
⁶⁾ An administrative connection is taken to mean a premises related to the technical connection (e.g. an apartment).

⁷⁾ In 2000 active as NV Waterleidingbedrijf Midden-Nederland.

⁸⁾ In 2000 active as NV Flevolandse Drinkwater Maatschappij.

⁹⁾ In 2000 active as NV Watermaatschappij Zuid-Holland Oost.

Figure 2 Personnel (own payroll)



Chapter 2 Water production

~ Water balance

Figure 3 shows the water balance for the year 2000. It shows the amounts of water collected, 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 company and figure 4 shows water extraction as of the year 1990. The most important conclusion is that the use of surface water increased by 4.7 percentage points over the past ten years to reach 39.2% in 2000 and that at the same time the use of river groundwater and groundwater dropped by 3 percentage points (to a share of 59.4%). The use of natural dune water dropped by 1.7 percentage points (to a share of 1.4%).

~ Water production

Table 3 shows the produced amounts of drinking water and *other water* by company. In 2000 water companies together produced 1,183 million m³ of drinking water; compared to 1,186 million m³ in 1999. Since 1990 drinking water production decreased by nearly 44 million m³ (-3.5%). This development has been indicated in figure 5.

Instead of drinking water ever more *other water* is being produced. This type of water is suitable for applications that require either a less rigorous quality than drinking water or indeed a higher quality (e.g. demi-water). Figure 6 shows that the production of *other water* rose from 51 million m³ in 1990 to 78 million m³ in 2000 (+53%). Adding the production of some non-included subsidiaries focusing on the production of *other water*, production in 2000 rose to 112 million m³ (+120%).

Figure 3 Water balance 2000 (in millions m³)

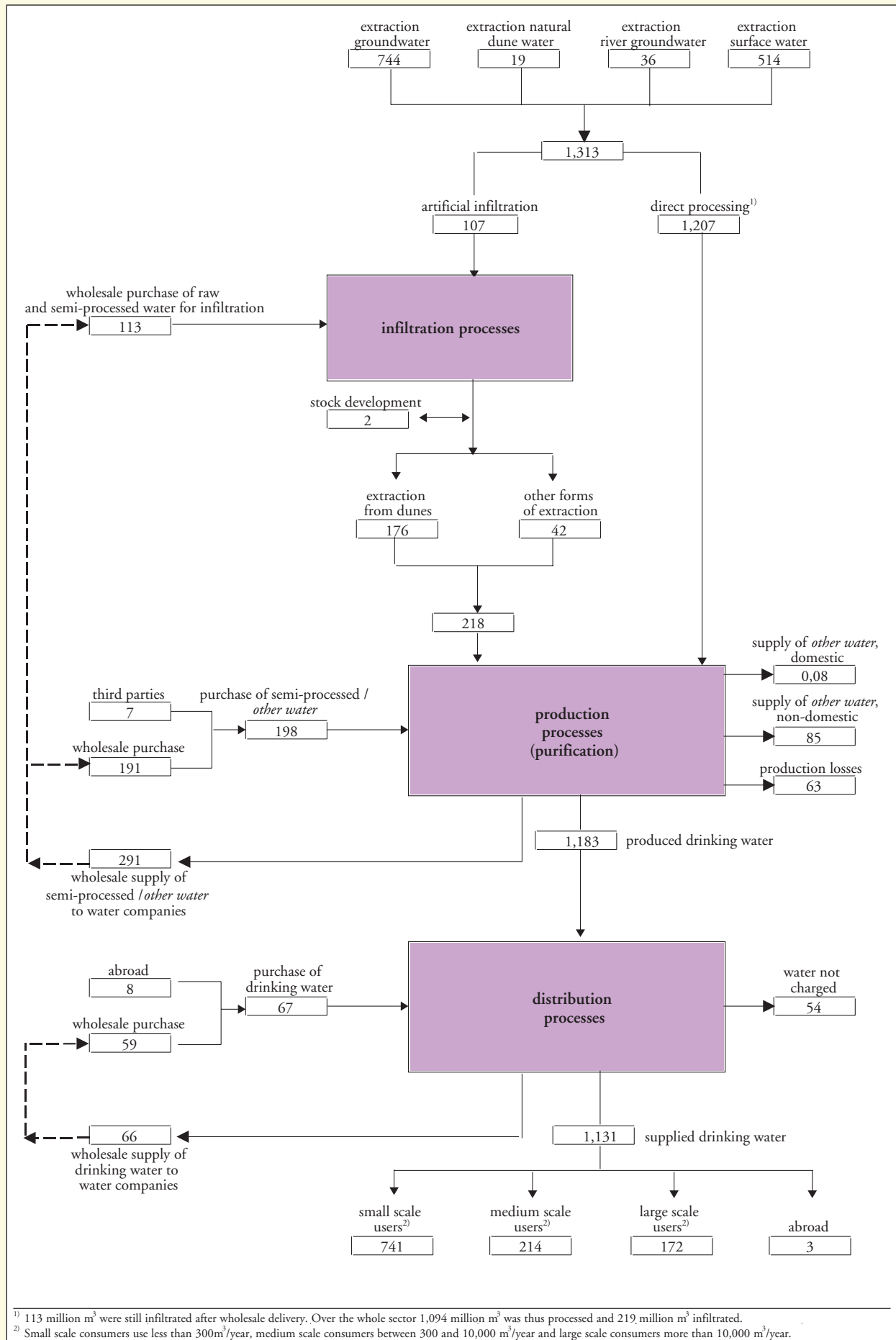


Table 2 Water extraction 2000

company	groundwater	river ground water	natural dune water	surface water	total
	<i>million m³</i>				
Wgron	46	-	-	17	63
NUON-WF	49	-	-	-	49
WMD	31	-	-	-	31
WMO	66	4	-	7	77
Wgeld	84	-	-	1	85
NUON-WG	52	-	-	-	52
WOV	5	-	-	-	5
Hydron-MN	80	-	-	-	80
Hydron-Fl	22	-	-	-	22
PWN	5	-	6	26	37
GWA	-	-	12	28	40
AMSTELLAND	-	-	-	-	-
WRK	1	-	-	154	155
Hydron-ZH	22	26	-	-	48
DZH	-	-	-	78	78
WBE	4	-	-	-	4
DELTA	16	-	0	12	28
WNWB	66	-	-	-	66
TWM	13	-	-	-	13
WOB	110	-	-	-	110
WBB	-	-	-	192	192
WML	65	6	-	-	72
NBM	6	-	-	-	6
The Netherlands	744	36	19	514	1,313

Table 3 Water production 2000

company	drinking water	other water ¹⁾	total
	<i>million m³</i>		
Wgron	47	13	60
NUON-WF	47	-	47
WMD	31	-	31
WMO	74	0	74
Wgeld	80	3	83
NUON-WG	51	-	51
WOV	5	-	5
Hydron-MN	80	0	80
Hydron-Fl	18	4	21
PWN	90	-	90
GWA	93	2	95
AMSTELLAND	-	-	-
WRK	-	149	149
Hydron-ZH	46	-	46
DZH	79	0	80
WBE	146	-	146
DELTA	40	15	55
WNWB	64	9	73
TWM	13	-	13
WOB	104	2	106
WBB	-	174	174
WML	68	-	68
NBM	6	-	6
The Netherlands total	1,183	369	1,553
<i>wholesale delivery of other water</i>		291	291
<i>net production</i>	1,183	78	1,262

¹⁾ Exclusive production by a number of subsidiary companies (approximately 34 million m³).

Figure 4 Water extraction

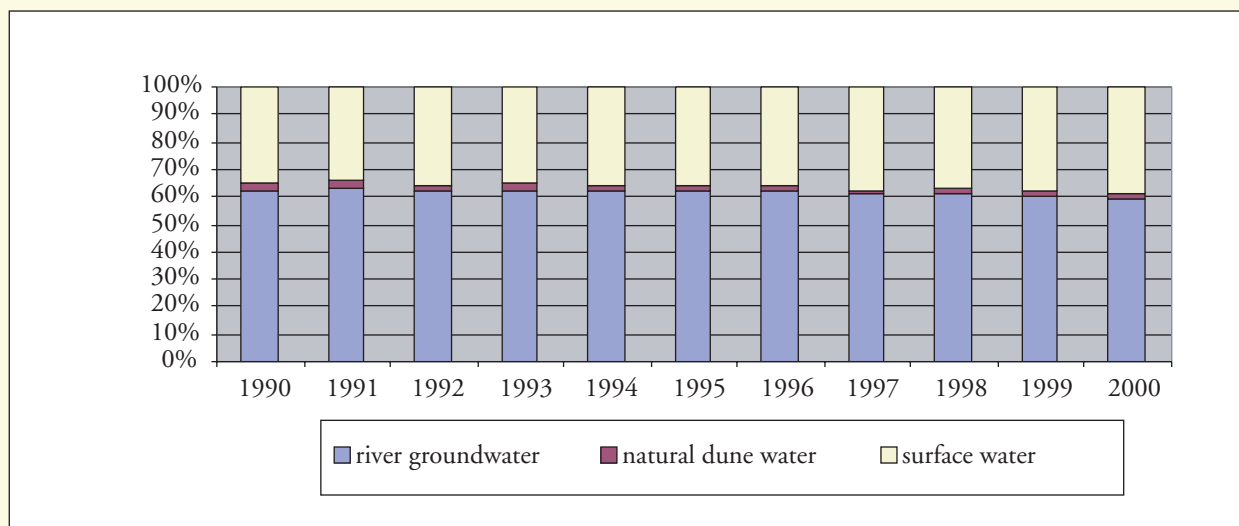


Figure 5 Production of drinking water

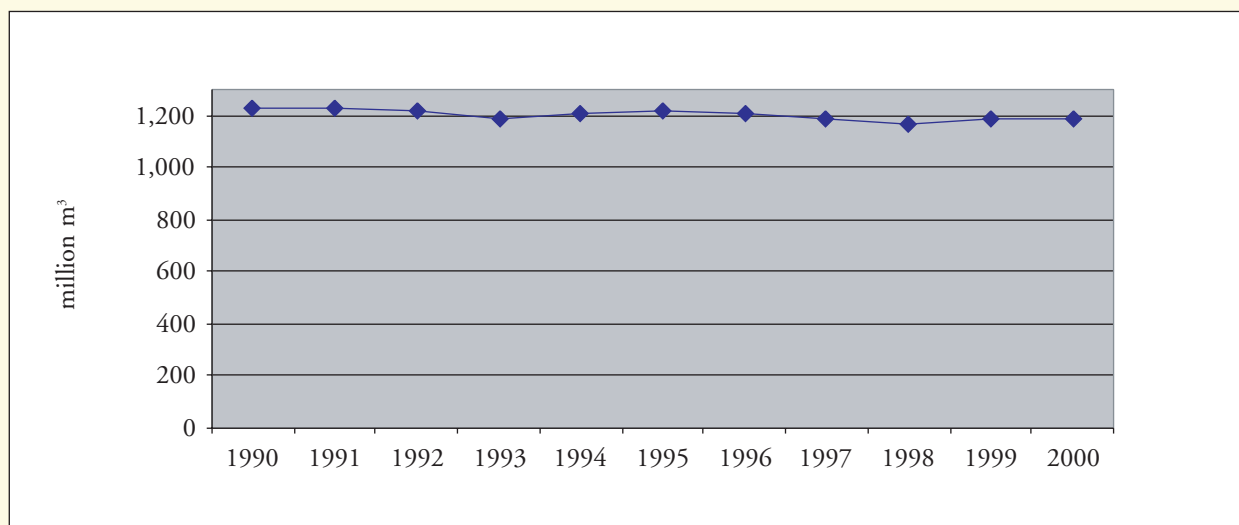
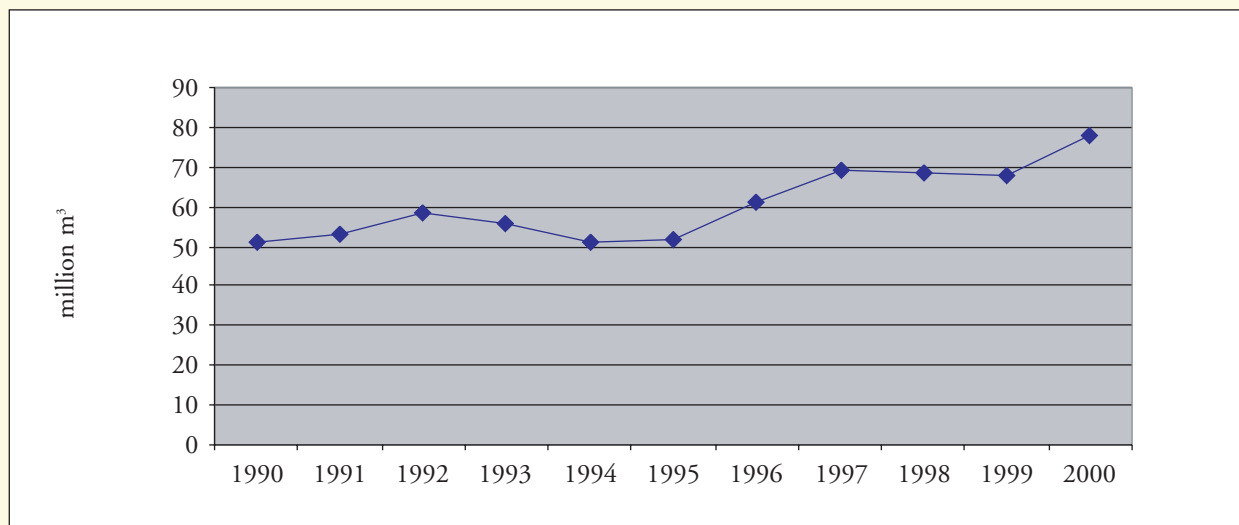


Figure 6 Production of other water¹⁾



¹⁾ Exclusive production by a number of subsidiaries (see footnote for table 3).

Chapter 3 Water sales

~ Water sales 2000

The Water balance 2000 (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 m³.

Table 4 Summary of water sales 2000

	connections ¹⁾	supply	average supply per connection	supply income ²⁾		average price ²⁾	
		<i>million m³</i>	<i>m³/connection</i>	<i>million NLG</i>	<i>million €</i>	<i>NLG/m³</i>	<i>€/m³</i>
Drinking water							
<i>Final users</i>	7,041,841	1,127	160	3,124	1,418	2.77	1.26
of which small scale users	6,740,953	741	110	2,197	997	2.96	1.35
medium scale users	296,508	214	722	552	251	2.58	1.17
large scale users	4,380	172	39,246	374	170	2.18	0.99
<i>Wholesale sales</i>	.	66	.	72	33	1.09	0.50
<i>Exports</i>	.	3	.	.	.	.	.
Other water							
<i>Final users</i>	3,819	86	22,397	86	39	1.00	0.46
of which domestic usage	3,576	0.08	23	0.11	0.05	1.34	0.61
other ³⁾	243	85	351,658	86	39	1.00	0.46
<i>Wholesale sales</i>	.	291	.	100	45	0.34	0.16
<i>Exports</i>	.	-	.	-	-	-	-
Total							
<i>Final users</i>	7,045,660	1,213	172	3,210	1,457	2.65	1.20
<i>Wholesale sales</i>	.	357	.	172	78	0.48	0.22
<i>Exports</i>	.	3	.	.	.	.	.

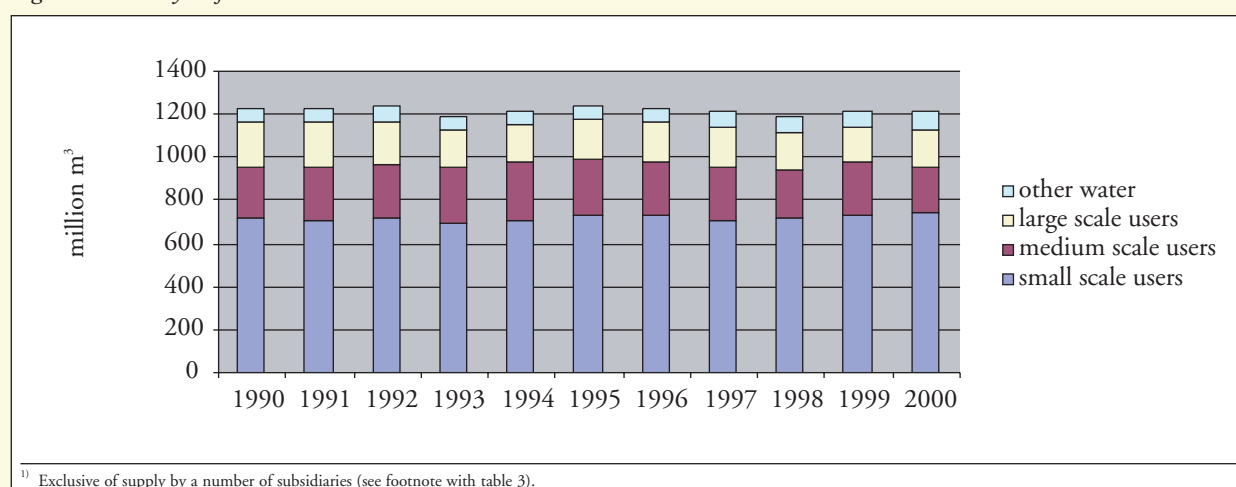
¹⁾ Administrative connections for drinking water, technical connections for other water.
²⁾ Consists of standing charges and the variable rate.
³⁾ Exclusive of sales by a number of subsidiaries (approximately 34 million m³).

Tables 5 and 6 show the connections, the supply and supply turnover respectively per consumer group (table 6a in guilders and table 6b in euro). The figures for the large scale market in table 6 include exports and wholesale supplies. Only for total Netherlands (at the bottom of the table) is a distinction made between large scale final users, *wholesale* market and exports.

~ Sales development

Figure 7 shows the development of water supply to final users. It demonstrates that the total supplied amount is almost the same as ten years ago. There has been a slight shift between the various water sectors. Drinking water sales decreased by 38 million m³ (-3.3%) while the supply of other water, including the 34 million m³ by the subsidiaries as referred to in the footnote for table 3, increased by 62 million m³ (+110%). Within the drinking water sector, small scale consumption went up by 29 million m³ in the past ten years (+4.1%) with a simultaneous drop of sales to medium scale and large scale consumers by 67 million m³ (-14.8%).

Figure 7 Delivery to final users¹⁾



~ 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 m³). Income rose from € 753 million in 1990 to € 1457 million in 2000.

The weighted average prices per consumer group calculated from the income and quantities supplied have been indicated in figure 9. The average price per m³ for all consumer groups increased from € 0.64 in 1990 to € 1.26 in 2000; the price of other water went up from € 0.18 to € 0.46.

Table 5 Connections on 31-12-2000¹⁾

company	technical connections ²⁾				%	administrative connections ³⁾			
	small scale users	medium scale users	large scale users	total		small scale users	medium scale users	large scale users	total
Wgron	247,869	10,351	225	258,445	95	256,726	10,351	225	267,302
NUON-WF	265,292	11,088	142	276,522	100	267,092	11,088	142	278,322
WMD	171,667	7,794	95	179,556	99	180,757	7,794	95	188,646
WMO	464,952	21,468	272	486,692	100	464,952	21,468	272	486,692
Wgeld	480,398	30,588	163	511,149	100	480,398	30,588	163	511,149
NUON-WG	234,933	18,394	159	253,486	100	271,426	18,394	159	289,979
WOV	-	-	-	-	-	-	-	-	-
Hydron-MN	410,681	23,416	348	434,445	99	484,992	23,661	351	509,004
Hydron-Fl	104,107	6,442	177	110,726	100	101,486	5,882	177	107,545
PWN	606,721	19,196	109	626,026	100	663,934	19,196	109	683,239
GWA	132,853	18,032	441	151,326	9	401,463	17,448	630	419,541
AMSTELLAND	25,497	1,226	33	26,756	97	40,801	1,226	33	42,060
WRK	-	-	-	-	-	-	-	-	-
Hydron-ZH	277,153	17,650	72	294,875	100	295,061	17,650	72	312,783
DZH	319,486	18,295	323	338,104	100	522,388	27,014	386	549,788
WBE	451,316	20,204	575	472,095	78	704,209	20,240	573	725,022
DELTA	214,229	575	131	214,935	100	201,325	575	131	202,031
WNWB	271,076	14,622	205	285,903	100	306,832	14,622	205	321,659
TWM	86,413	2,497	60	88,970	100	68,228	2,469	60	70,757
WOB	503,162	28,017	336	531,515	100	557,345	28,017	336	585,698
WBB	-	-	-	-	-	-	-	-	-
WML	401,800	17,690	230	419,720	100	438,316	17,826	231	456,373
NBM	33,222	999	30	34,251	100	33,222	999	30	34,251
The Netherlands	5,702,827	288,544	4,126	5,995,497	96	6,740,953	296,508	4,380	7,041,841

¹⁾ Small scale consumers use less than 300m³/year, medium scale consumers between 300 and 10,000 m³/year and large scale consumers more than 10,000 m³/year.

²⁾ A technical connection consists of the distribution pipe between the mains network and the end user, including water metre (if present).

³⁾ 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 6a Sales of drinking water 2000 (NLG) ¹⁾

company	supply				income			
	small scale users	medium scale users	large scale users ²⁾	total	small scale users	medium scale users	large scale users ²⁾	total
	<i>1000 m³</i>				<i>1000 NLG</i>			
Wgron	24,263	8,592	12,944	45,798	51,965	17,700	18,028	87,693
NUON-WF	26,338	10,096	7,489	43,923	76,644	23,778	17,609	118,031
WMD	18,141	6,809	6,372	31,322	44,983	13,047	9,864	67,894
WMO	48,408	17,789	9,517	75,714	133,560	49,564	25,818	208,942
Wgeld	52,319	24,289	10,455	87,063	149,002	55,344	14,208	218,554
NUON-WG	26,886	13,653	12,781	53,320	65,326	26,760	19,535	111,621
WOV	-	-	5,149	5,149	-	-	3,270	3,270
Hydron-MN	47,026	21,385	8,618	77,028	108,186	42,556	17,087	167,829
Hydron-Fl	12,335	3,213	1,820	17,368	29,673	6,344	5,423	41,440
PWN	72,235	21,206	9,543	102,983	259,705	72,347	26,468	358,520
GWA	42,977	10,043	37,897	90,917	122,993	29,529	55,983	208,505
AMSTELLAND	3,236	1,472	738	5,446	9,838	3,606	1,731	15,175
WRK	-	-	-	-	-	-	-	-
Hydron-ZH	36,640	5,847	7,645	50,132	128,763	21,019	19,604	169,386
DZH	65,467	3,448	10,181	79,097	257,403	10,896	18,343	286,642
WBE	83,440	9,367	49,072	141,879	252,903	22,975	87,490	363,368
DELTA	29,574	2,287	8,085	39,946	84,582	5,168	10,544	100,294
WNWB	34,043	11,517	16,833	62,392	91,443	27,000	25,393	143,836
TWM	8,874	1,973	2,131	12,978	20,427	2,887	3,004	26,318
WOB	59,393	24,474	13,889	97,756	161,391	69,613	31,588	262,592
WBB	-	-	-	-	-	-	-	-
WML	46,489	14,679	9,233	70,401	140,135	46,892	33,280	220,307
NBM	3,162	2,033	631	5,826	8,358	5,374	1,668	15,400
The Netherlands	741,244	214,173	241,023	1,196,439	2,197,280	552,398	445,939	3,195,617
<i>of which</i>								
wholesale			65,701	65,701			71,850	71,850
export			3,424	3,424			-	-
final sales	741,244	214,173	171,898	1,127,314	2,197,280	552,398	374,089	3,123,767

¹⁾ Small scale consumers use less than 300m³/year, medium scale consumers between 300 and 10,000 m³/year and large scale consumers more than 10,000 m³/year.
²⁾ The individual details shown in this table include wholesale and exports. For Netherlands at the bottom of the table a distinction is made between the final large scale market, wholesale sale and exports.

Figure 8 Income from delivery to final users

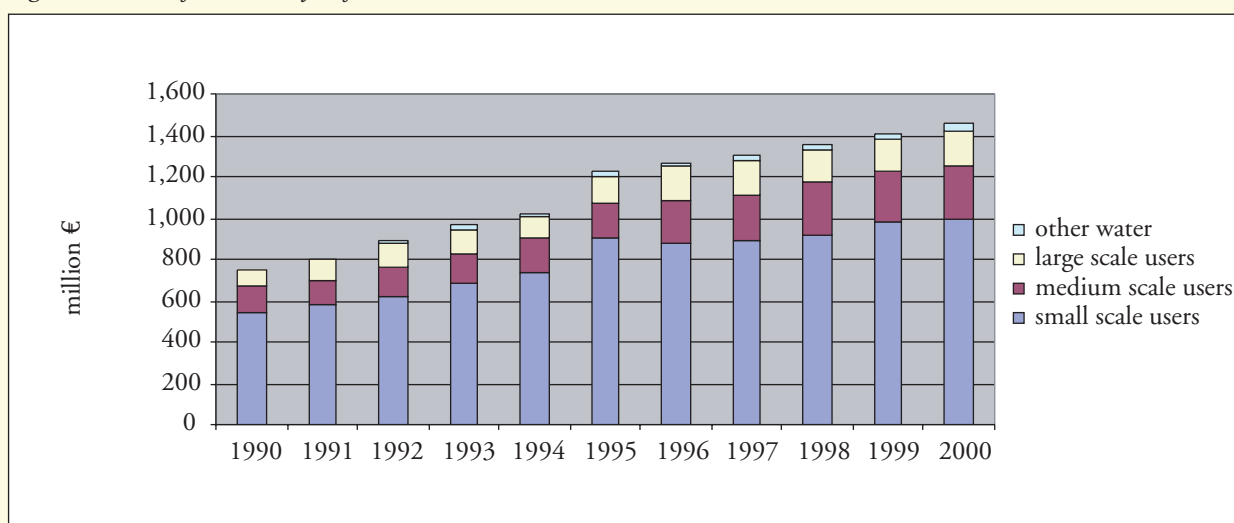
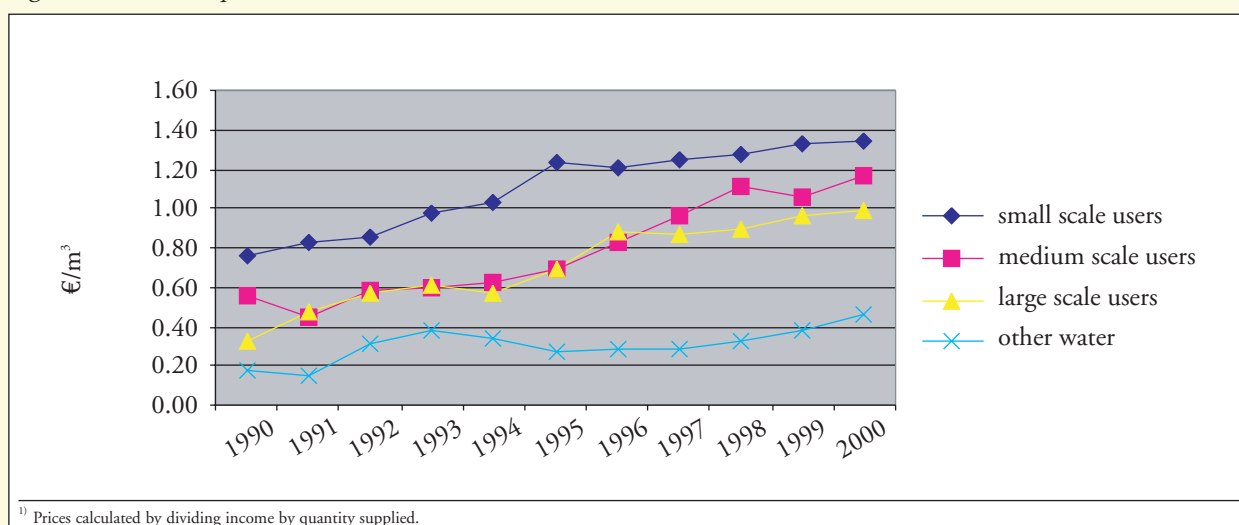


Table 6b Sales of drinking water 2000 (€) ¹⁾

company	supply				income			
	small scale market	medium scale market	large scale market ²⁾	total	small scale market	medium scale market	large scale market ²⁾	total
	<i>1000 m³</i>				<i>1000 €</i>			
Wgron	24,263	8,592	12,944	45,798	23,580	8,032	8,181	39,793
NUON-WF	26,338	10,096	7,489	43,923	34,780	10,790	7,991	53,560
WMD	18,141	6,809	6,372	31,322	20,412	5,920	4,476	30,809
WMO	48,408	17,789	9,517	75,714	60,607	22,491	11,716	94,814
Wgeld	52,319	24,289	10,455	87,063	67,614	25,114	6,447	99,175
NUON-WG	26,886	13,653	12,781	53,320	29,644	12,143	8,865	50,651
WOV	-	-	5,149	5,149	-	-	1,484	1,484
Hydron-MN	47,026	21,385	8,618	77,028	49,093	19,311	7,754	76,158
Hydron-Fl	12,335	3,213	1,820	17,368	13,465	2,879	2,461	18,805
PWN	72,235	21,206	9,543	102,983	117,849	32,830	12,011	162,689
GWA	42,977	10,043	37,897	90,917	55,812	13,400	25,404	94,616
AMSTELLAND	3,236	1,472	738	5,446	4,464	1,636	785	6,886
WRK	-	-	-	-	-	-	-	-
Hydron-ZH	36,640	5,847	7,645	50,132	58,430	9,538	8,896	76,864
DZH	65,467	3,448	10,181	79,097	116,804	4,944	8,324	130,072
WBE	83,440	9,367	49,072	141,879	114,762	10,426	39,701	164,889
DELTA	29,574	2,287	8,085	39,946	38,382	2,345	4,785	45,512
WNWB	34,043	11,517	16,833	62,392	41,495	12,252	11,523	65,270
TWM	8,874	1,973	2,131	12,978	9,269	1,310	1,363	11,943
WOB	59,393	24,474	13,889	97,756	73,236	31,589	14,334	119,159
WBB	-	-	-	-	-	-	-	-
WML	46,489	14,679	9,233	70,401	63,590	21,279	15,102	99,971
NBM	3,162	2,033	631	5,826	3,793	2,439	757	6,988
The Netherlands	741,244	214,173	241,023	1,196,439	997,082	250,667	202,359	1,450,108
of which								
wholesale			65,701	65,701			32,604	32,604
export			3,424	3,424			-	-
final sales	741,244	214,173	171,898	1,127,314	997,082	250,667	169,754	1,417,504

¹⁾ Small scale consumers use less than 300m³/year, medium scale consumers between 300 and 10,000 m³/year and large scale consumers more than 10,000 m³/year.
²⁾ The individual details shown in this table include wholesale and exports. For Netherlands at the bottom of the table a distinction is made between the final large scale market, wholesale sale and exports.

Figure 9 Price development ¹⁾



¹⁾ Prices calculated by dividing income by quantity supplied.

Table 7 Rates of drinking water to households 2000 ¹⁾

company	standing charge	variable per m ³	integral ²⁾	standing charges	variable per m ³	integral ²⁾
	<i>NLG</i>			€		
Wgron						
Province	51.60	1.72 ³⁾	1.72	23.42	0.78 ³⁾	0.78
City	82.20	3.09 ⁴⁾	3.11	37.30	1.40 ⁴⁾	1.41
NUON-WF	60.50	2.36	2.91	27.45	1.07	1.32
WMD	61.60	1.81	2.38	27.95	0.82	1.08
WMO	30.60	2.51	2.79	13.89	1.14	1.26
Wgeld	35.83	2.55	2.88	16.26	1.16	1.31
NUON-WG	62.52	1.86	2.43	28.37	0.84	1.10
Hydron-MN	32.52	1.99	2.29	14.76	0.90	1.04
Hydron-Fl	-	2.51	2.51	-	1.14	1.14
PWN						
General	87.72	2.91	3.72	39.81	1.32	1.69
Haarlem, Bloemendaal, Zandvoort and Velsen	96.00	3.46	4.34	43.56	1.57	1.97
GWA						
General	87.00	2.81	3.61	39.48	1.28	1.64
Heemstede	69.00	2.55	3.19	31.31	1.16	1.45
AMSTELLAND						
Amstelveen	-	2.82	2.82	-	1.28	1.28
Ouder-Amstel	138.36	2.17	3.44	62.79	0.98	1.56
Hydron-ZH						
General	96.80	2.93	3.82	43.93	1.33	1.73
Alphen a/d Rijn, Zwam- merdam and Aarlanderveen	96.80	3.08	3.97	43.93	1.40	1.80
DZH						
The Hague/Leiden	122.00	3.14	4.26	55.36	1.42	1.93
Warmond	105.80	3.14	4.11	48.01	1.42	1.87
Rijnwoude	99.20	3.14	4.05	45.01	1.42	1.84
Voorburg	99.60	3.14	4.06	45.20	1.42	1.84
Other municipalities	90.00	3.14	3.97	40.84	1.42	1.80
WBE						
General	137.04	1.91	3.17	62.19	0.87	1.44
Delft	106.80	2.26	3.24	48.46	1.03	1.47
Hoeksche Waard	126.12	1.91	3.07	57.23	0.87	1.39
Westland	107.64	1.85	2.84	48.84	0.84	1.29
DELTA						
General	88.56	2.16	2.98	40.19	0.98	1.35
Goeree-Overflakkee	88.56	2.16	2.98	40.19	0.98	1.35
Putte, Ossedrecht and Woensdrecht	93.00	1.77	2.63	42.20	0.80	1.19
WNWB	93.00	1.84	2.70	42.20	0.83	1.22
TWM						
Tilburg	60.60	2.02	2.57	27.50	0.91	1.17
Goirle	60.60	1.97	2.52	27.50	0.89	1.14
WOB						
General	66.00	2.13	2.74	29.95	0.97	1.24
Helmond and Mierlo	66.00	2.28	2.89	29.95	1.03	1.31
WML	35.04	2.81	3.13	15.90	1.27	1.42
NBM	42.00	2.83	3.22	19.06	1.28	1.46

¹⁾ Metered houses. Exclusive 6% VAT and water tax (0.129 €/m³), including groundwater tax. Standing charges include distribution and concession reimbursements.

²⁾ The integral cost price per m³ calculated from the standing charges and variable rate for an average family of 2.36 individuals (CBS, January 1999) and average consumption per individual of 46 m³ a year (VEWIN, 2000). Calculation: (standing charges + 2.36 x 46 x variable rate) / (2.36 x 46).

³⁾ Up to 30 m³ nil, more than 30 m³ NLG 1.72.

⁴⁾ Up to 26 m³ nil, more than 26 m³ NLG 3.09.

Table 8 Breakdown of domestic water consumption

	1992	1995	1998
	<i>litres/person,day</i>		
bath	8.0	9.0	6.7
shower	39.5	38.3	39.7
washbasin	3.7	4.2	5.1
toilet flush	42.7	39.0	36.2
washing, by hand	2.5	2.1	2.1
washing, by machine	23.2	25.5	23.2
washing up, by hand	8.8	4.9	3.8
washing up, by dishwasher	0.7	0.9	1.9
food preparation	2.6	2.0	1.7
other	3.3	8.2	7.6
total	135.0	134.1	128.0

Source: report on domestic water consumption by VEWIN/NIPO, 1999.

Some 28% of the increase of drinking water price is due to general depreciation (€ 0.17/m³); 17% is caused by the introduction of groundwater tax (€ 0.11/m³). Insufficient details are available to calculate the contribution of the other cost components.

Reflections on Performance 2000 (see appendix 4) compares the costs of drinking water activities in 2000 to those in 1997, analysing thoroughly the various cost components. Drinking water activities in this context are explained in appendix 3. The report shows that the total costs of drinking water activities, without correction for currency depreciation, increased from € 1.15 per m³ in 1997 to € 1.28 per m³ in 2000.

~ *Rates*

Table 7 shows the drinking water rates in 2000 for domestic use. The rates have been copied from the VEWIN publication *Overview of water charges on 1 January 2000* (Tarievenoverzicht leidingwater per 1 januari 2000). The outcome in the 'integral rate' column has been calculated using the standing charges and the variable rate, indicating the average drinking water price per m³ for a standard family (2.36 individuals) at average consumption (46 m³/individual/year). The formula used for calculation can be found in the table footnote.

~ *Breakdown domestic drinking water consumption*

Every three years VEWIN carries out research among the Dutch population on the breakdown of domestic water consumption. Table 8 shows the most important outcomes of the latest research.

The main uses of domestic drinking water are the shower (31%), the toilet (28%) and the washing machine (18%). The domestic water consumption per head per day between 1992 and 1998 dropped from 135 to 128 litres. This drop is expected to continue, inter alia because of the further sale of low water use toilets and washing machines. Despite the decline of domestic consumption per head, sales to small scale users increased by 4 million m³ between 1992 and 1998. This was due to growth of the population.

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 (exclusive of the details of Delta Nutsbedrijven). The balance was created by aggregating the individual figures of the companies, most of which was valued at historical cost price. One single deviation to this system has not been corrected.

The total balance sheet assets at the end of 2000 were € 5.3 billion, of which € 1 billion (19.4%) was financed with own capital, € 3.8 billion (71.1%) with loan capital and € 0.5 billion (9.5%) with other capital (contributions from third parties and contingencies).

Table 9 Financial balance sheet on 31-12-2000 ¹⁾

	<i>million NLG</i>	<i>million €</i>
Assets		
<i>fixed assets</i>		
- tangible fixed assets	10,441	4,738
- intangible fixed assets	261	118
- financial fixed assets	239	108
- total	10,941	4,965
<i>current assets</i>		
- stocks	53	24
- account receivables/debtors	693	314
- liquid assets/cash	46	21
- total	792	359
Total	11,733	5,324
Liabilities		
<i>shareholders' equity</i>		
- share capital	266	121
- reserves	2,004	910
- total	2,271	1,030
<i>other capital</i>		
- contributions from third parties	784	356
- contingencies	334	152
- total	1,119	508
<i>long-term loan capital</i>	6,411	2,909
<i>short-term loan capital</i>		
- loans	1,017	461
- creditors	410	186
- advances	52	23
- other	455	206
- total	1,933	877
Total	11,733	5,324

¹⁾ Exclusive Delta Nutsbedrijven; valuation at historic cost price.

~ Investments

The development of investments by the water companies is shown in figure 10. Since 1992 investment levels have fluctuated around € 0.5 billion a year. In 2000 investments amounted to € 419 millions, of which 50% was invested in distribution processes, 39% in production processes and 4% in information and communication technology.

Figure 10 Development of investments ¹⁾

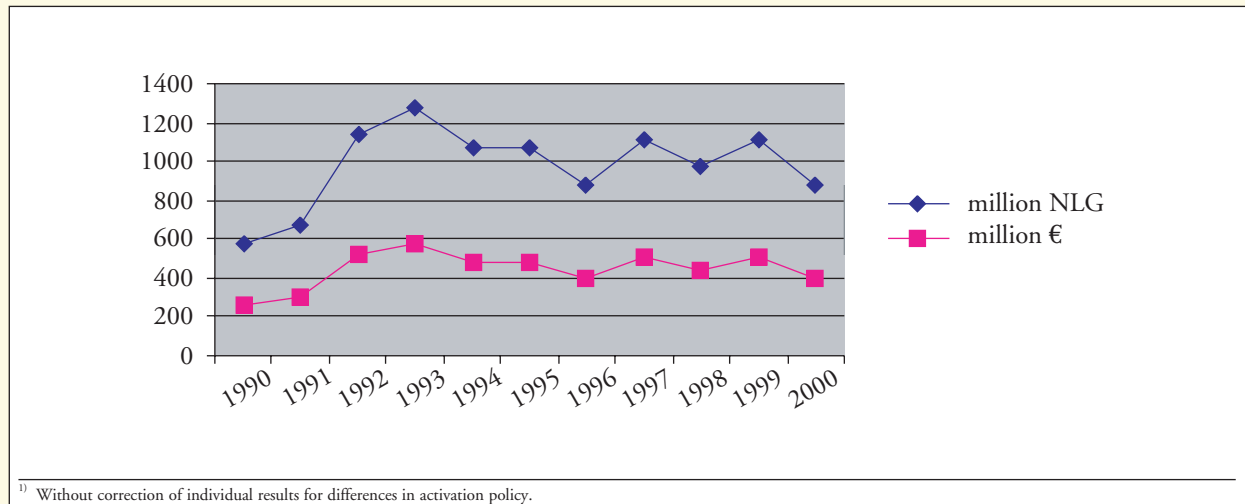
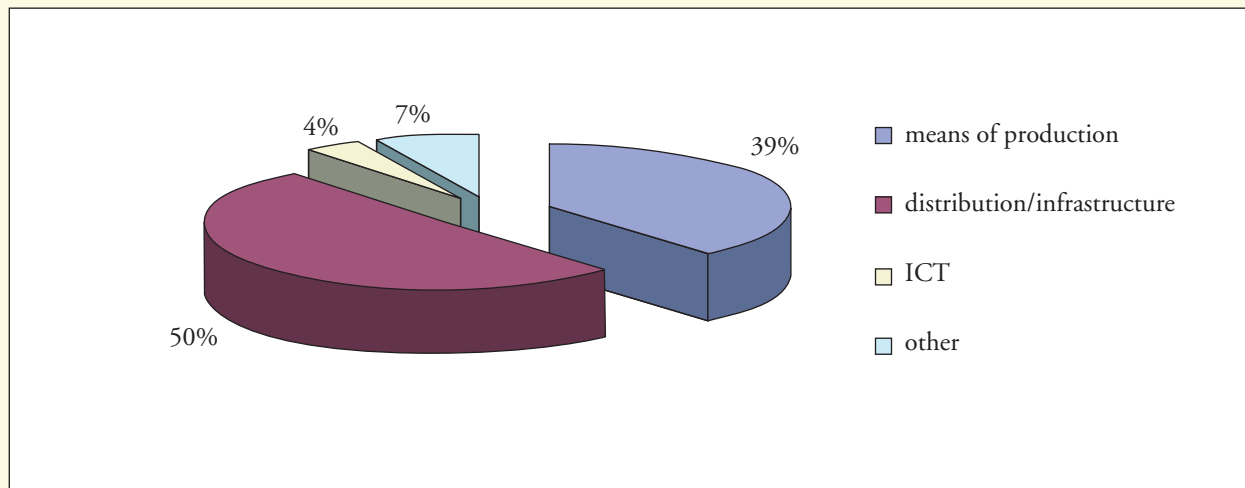


Figure 11 Investments by process 2000



~ 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	1996	1997	1998	1999	2000
	<i>cent/m³</i>					
<i>groundwater tax</i>						
normal rate	34.0	34.0	34.0	34.0	34.7	35.3
infiltration discount ¹⁾	28.0	28.0	28.0	28.0	29.1	29.6
rate for OEDIs ²⁾						11.4
<i>tap water tax³⁾</i>						28.5
	<i>euro-cent/m³</i>					
<i>groundwater tax</i>						
normal rate	15.4	15.4	15.4	15.4	15.8	16.0
infiltration discount ¹⁾	12.7	12.7	12.7	12.7	13.2	13.4
rate for OEDIs ²⁾						5.2
<i>tap water tax³⁾</i>						12.9

¹⁾ Discount on normal rate with prior infiltration (Water Resource Tax Act, article 6).
²⁾ Groundwater extraction preceded by river water infiltration and depth infiltration. The rate applies insofar the amount of groundwater extracted in one year does not exceed the amount infiltrated in that year.
³⁾ Tax on drinking water and other water that is supplied by a water company. The tax only applies to the delivery of the first 300 m³.

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 (1,127 million m³, see table 4). Table 11 shows the outcomes of this, along with other taxes.

Table 11 Taxes 2000

	Total	drinking water share ¹⁾		Total	drinking water share ¹⁾	
	levy	levy	levy	levy	levy	levy
		per m ³ ²⁾			per m ³ ²⁾	
	<i>million NLG</i>	<i>NLG/m³</i>		<i>million €</i>	<i>€/m³</i>	
Water taxes						
<i>direct taxes (cost-price increasing)</i>						
national groundwater tax	291	264	0.23	132	120	0.11
provincial groundwater levy	21	19	0.02	9	9	0.01
distribution and concession reimbursements	16	16	0.01	7	7	0.01
total	328	299	0.26	149	135	0.12
<i>indirect taxes</i>						
tap water tax ³⁾	237	237	0.21	108	108	0.10
VAT on water sales ⁴⁾	193	187	0.17	87	85	0.08
VAT on tap water tax ⁵⁾	14	14	0.01	6	6	0.01
total	444	439	0.39	201	199	0.18
<i>total water taxes</i>	772	737	0.65	350	334	0.30
Local taxes⁶⁾	10.4	10.0	0.01	4.7	4.4	0.00
Total	782	747	0.66	355	339	0.30

¹⁾ The drinking water share has been calculated. On calculation of the direct taxes the outcomes of the 2000 benchmark were used, which differentiates drinking water activities and non-drinking water activities. The share of the drinking water activities in taxes amounts to 90.6% for the national groundwater tax, 91% for provincial groundwater levy and 99.6% for piping and concession reimbursements. The calculation of the indirect taxes is shown in footnotes 3 to 5; local taxes have been allocated in proportion to *total water taxes*.
²⁾ The drinking water levy calculated in the previous column divided by the drinking water supplied to final users (1,127 million m³).
³⁾ Levy estimated as follows: supply of small scale drinking water x rate for tap water tax (€ 0.129/m³) + medium scale and large scale administrative connections for drinking water x 300 m³ 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 m³ x rate for tap water tax.
⁴⁾ Calculated as follows: income from water delivered to final users x 6%, respectively income from drinking water delivered to final users x 6%.
⁵⁾ Calculated as follows: previously calculated tax on tap water x 6% (VAT is also levied over tax on tap water).
⁶⁾ Municipal taxes and taxes of district water boards.

Allocated over the total drinking water supply the provincial groundwater levy amounts to 0.8 eurocent/m³; distribution and concession reimbursements to 0.6 eurocent/m³. Allocated over drinking water from groundwater or infiltrated water (almost 70% of total drinking water supply) average tax load of the provincial groundwater levy amounts to 1.1 eurocent/m³.

In 2000, the total tax load was € 355 million, of which € 339 million was allocated to drinking water supplied to final users, that is € 0.30 per m³ of drinking water. € 334 million (€ 0.30/m³) of this regard taxes on drinking water and € 4 million (€ 0.004/m³) on local taxes (levied by municipalities and district water boards).

The € 334 million drinking water taxes include € 135 million (€ 0.12/m³) from direct (price increasing) taxes and € 199 million from indirect taxes (€ 0.18/m³). The indirect taxes 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.

The table below shows the build-up of the average drinking water price in 2000 of all consumer groups together:

Table 12 Structure of the drinking water price 2000 (average for all consumer groups)

	<i>NLG/m³</i>	<i>€/m³</i>	<i>%</i>
price increasing taxes	0.26	0.12	8.3
local taxes	0.01	0.00	0.3
reimbursement for the water company	2.50	1.14	79.1
<i>subtotal: price charged by the water company (see table 4)</i>	<i>2.77</i>	<i>1.26</i>	
indirect taxes	0.39	0.18	12.3
<i>total amount due per average consumer</i>	<i>3.16</i>	<i>1.44</i>	

In the case of small scale consumers (< 300 m³) tap water tax applies to the whole consumption, as a result of which tax load for this consumer group exceeds the above average tax load of all final users together (€ 0.30/m³). Tax load for small scale consumers is € 0.34 per m³. Table 13 shows the build-up of the average drinking water price for small scale consumers.

Table 13 Structure of the drinking water price 2000 (for small scale consumers)

	<i>NLG/m³</i>	<i>€/m³</i>	<i>%</i>
cost-price increasing taxes	0.26	0.12	7.6
local taxes	0.01	0.00	0.3
reimbursement for the water company	2.69	1.23	78.2
<i>subtotal: price charged by the water company (see table 4)</i>	<i>2.96</i>	<i>1.35</i>	
indirect taxes ¹⁾	0.48	0.22	14.0
<i>total amount due per average small-scale consumer</i>	<i>3.44</i>	<i>1.57</i>	

¹⁾ Tap water tax + VAT for tap water tax + VAT for the price charged by the water company: 0.285 + (0.06 x 0.285) + (0.06 x 2.96), respectively 0.129 + (0.06 x 0.129) + (0.06 x 1.35).

Chapter 5 Infrastructure

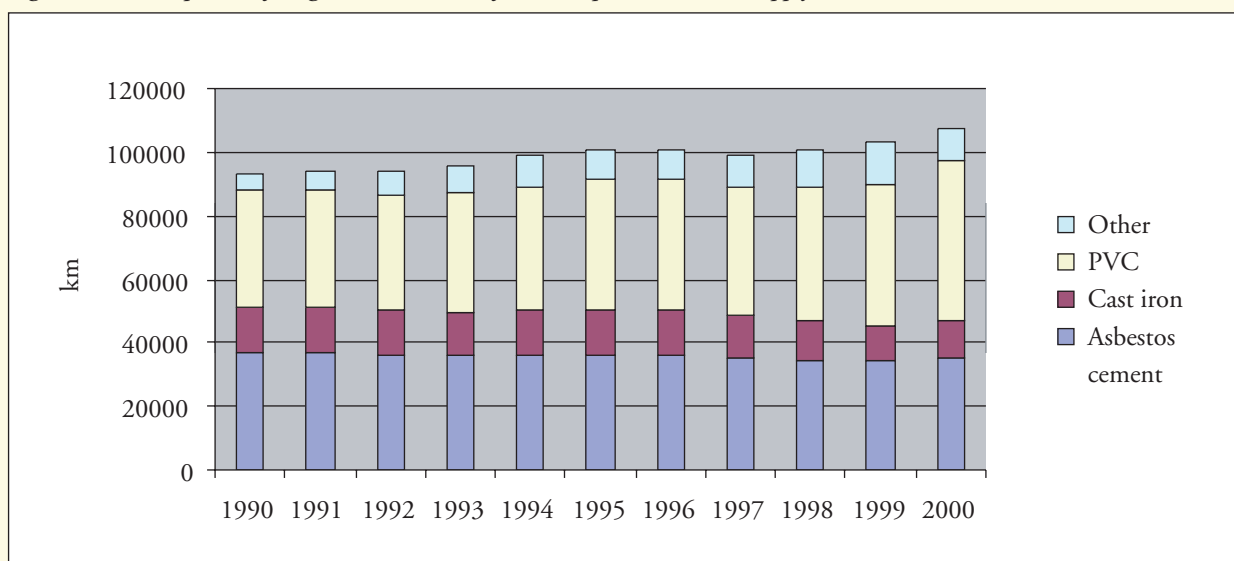
Table 14 gives an overview of the length and structure of the transport and mains supply network as on 31 december 2000. The development of the network length and the most applicable materials; asbestos cement, PVC and cast iron are shown in figure 12. In this figure all other materials are referred to under 'other'.

Table 14 Length and structure of the transport and mains supply network on 31-12-2000 ¹⁾

company	total	asbestos cement	cast iron	nodular cast iron	steel	concrete	PVC	poly- thene	glass fibre reinforced synthetics	other
<i>kilometre</i>										
Wgron	3,736	1,715	1,033	-	116	24	807	34	7	-
NUON-WF	6,742	2,387	681	-	25	22	3,546	81	-	-
WMD	4,064	1,565	252	-	-	-	2,223	-	-	24
WMO	11,958	1,616	949	-	-	-	9,035	254	-	104
Wgeld	12,946	3,790	944	-	104	-	8,108	-	-	-
NUON-WG	3,296	650	816	27	5	-	1,642	71	-	85
WOV	-	-	-	-	-	-	-	-	-	-
Hydron-MN	6,072	1,778	1,203	4	30	40	2,278	734	5	-
Hydron-Fl	2,003	511	-	-	4	-	1,420	68	-	-
PWN	9,407	4,731	1,045	426	153	196	1,687	1,147	19	3
GWA	2,250	11	796	363	56	194	539	144	3	144
AMSTELLAND	371	55	11	-	-	-	286	19	-	-
WRK	332	-	-	-	-	332	-	-	-	-
Hydron-ZH	3,482	571	371	3	177	2	2,029	329	-	-
DZH	4,107	802	953	116	29	89	1,954	153	-	11
WBE	6,184	971	349	13	506	37	3,779	448	-	81
DELTA	5,435	2,384	257	-	334	85	2,301	74	-	-
WNWB	6,028	2,020	710	-	38	5	3,186	47	-	22
TWM	837	126	301	57	-	-	345	2	6	-
WOB	10,394	5,158	699	-	43	35	4,414	30	-	15
WBB	25	-	-	-	18	7	-	-	-	-
WML	7,408	4,143	407	1,082	1,068	2	560	12	-	134
NBM	423	37	-	-	251	-	135	-	-	-
The Netherlands	107,500	35,021	11,777	2,091	2,957	1,070	50,274	3,647	40	623

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

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



Appendix 1

LIST OF VEWIN PUBLICATIONS

	price non-members	price members
Statistics		
Water in Zicht, Bedrijfsvergelijking in de Drinkwatersector (benchmark report) ¹⁾	€ 27.20	€ -
Reflections on Performance 2000; Benchmarking in the Dutch Drinking Water Industry (www.waterleiding.nl/benchmark)	€ -	€ -
CD-ROM Statistiek Waterkwaliteit (water quality statistics) ²⁾	€ 135.60	€ 36.80
Tarievenoverzicht leidingwater (overview of water charges) ¹⁾	€ 12.00	€ -
Other		
Jaarboek voor de Waterleiding in Nederland (water supply yearbook) ¹⁾	€ 18.15	€ 12.50
Wegwijzer Waterkwaliteit (guide to water quality) ¹⁾	€ 56.70	€ 38.60
140 jaar Drinkwaterleiding in Nederland (1853-1993) (140 years of drinking water in the Netherlands) ¹⁾	€ 13.60	€ 11.35
All about Dutch drinking water ¹⁾	€ 6.80	€ 3.40

¹⁾ Including 6% VAT

²⁾ Including 19% VAT

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Appendix 2

SUPPLY AREAS WITH RELATED MUNICIPALITIES

- ~ *Waterbedrijf Groningen*
All Groningen municipalities and the municipality of Tynaarlo (Eelde-Paterswolde).
- ~ *NUON Water Fryslân*
All Friesland municipalities.
- ~ *Waterleidingmaatschappij Drenthe*
Aa en 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 Ooststellingwerf.
- ~ *Waterleiding Maatschappij Overijssel*
Almelo, Ambt-Delden, Avereest, Bathmen, Borne, Brederwiede, Dalfsen, Denekamp, Deventer, Diepenheim, Diepenveen, Enschede, Genemuiden, Goor, Gramsbergen, Den Ham, Hardenberg, Hasselt, Havelte, Heino, Hellendoorn, Hengelo (O), Holten, Kampen, Losser, Markelo, Meppel, Nieuwleusen, Noordoostpolder, Oldenzaal, Olst, Ommen, Ootmarsum, Raalte, Rijssen, Stad-Delden, Staphorst, Steenwijk, Tubbergen, Urk, Vriezenveen, Weerselo, Wierden, Wijhe, IJsselham, IJsselmuiden, Zwartsluis and Zwolle.
- ~ *Waterbedrijf Gelderland*
Aalten, Angerlo, Barneveld, Bemmelen, Bergh, Beuningen, Borculo, Buren, Culemborg, Didam, Dinxperlo, Dodewaard, Doesburg, Doetinchem, Druten, Duiven, Echteld, Eibergen, Elburg, Elst, Epe, Ermelo, Geldermalsen, Gendringen, Dendt, Gorssel, Groenlo, Groesbeek, Haaksbergen, Harderwijk, Hattum, Heerde, Hengelo (Gld), Heteren, Heumen, Huissen, Hummelo and Keppel, Kesteren, Lichtenvoorde, Lingewaal, Lochem, Maasdriel, Millingen aan de Rijn, Neede, Nerijsen, Nijkerk, Nunspeet, Oldebroek, Putten, Rijnwaarden, Ruurlo, Steenderen, Tiel, Ubbergen, Valburg, Voorst, Vorden, Warnsveld, Wehl, West-Maas and Waal, Westervoort, Wijchen, Winterswijk, Wisch, Zaltbommel, Zelhem, Zevenaar and Zutphen.
- ~ *NUON Water Gelderland*
Apeldoorn, Arnhem, Ede, Nijmegen, Renkum, Rheden, Rozendaal and Wageningen.
- ~ *Bronwaterleiding Doorn*
Doorn
- ~ *Hydron Midden-Nederland*
Abcoude, Amerongen, Amersfoort, Baarn, De Bilt, Breukelen, Bunnik, Bunschoten, De Ronde Venen, Driebergen-Rijsenburg, Eemnes, Harmelen, Hilversum, Houten, Leersum, Leusden, Loenen, Loosdrecht, Lopik, Maarn, Maarsse, Maartensdijk, Montfoort, Nieuwegein, Oudewater, Renswoude, Rhenen, Scherpenzeel, Soest, Utrecht, Veenendaal, Vleuten-De Meern, Woerden, Woudenberg, Wijk bij Duurstede, IJsselstein and Zeist. Supplies a number of areas in Kortenhoef.
- ~ *Hydron Flevoland*
Almere, Dronten, Lelystad and Zeewolde.

- ~ *PWN Waterleidingbedrijf Noord-Holland*
Aalsmeer, Akersloot, Alkmaar, Amstelveen (gedeeltelijk), Andijk, Anna Palowna, Beemster, Bennebroek, Bergen (NH), Beverwijk, Blaricum, Bloemendaal, Bussum, Castricum, Drechterland, Edam-Volendam, Egmond, Enkhuizen, Graft-de Rijp, '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, Leimuiden, Loos-drecht, Muiden and Warmond.
- ~ *Gemeentewaterleidingen Amsterdam*
Amsterdam, Diemen, Heemstede and Muiden. Supplies to areas in a number of surrounding municipalities.
- ~ *Nutsbedrijf Amstelland*
Amstelveen and Ouder-Amstel.
- ~ *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.
- ~ *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.
- ~ *Delta Nutsbedrijven*
Axel, Bergen op Zoom (Halsteren), Borsele, Dirksland, Goedereede, Goes, Hontenisse, Hulst, Kapelle, Middelburg, Middelharnis, Noord-Beveland, Oostburg, Oostflakkee, Reimerswaal, Sas van Gent, Schouwen-Duiveland, Sluis-Aardenburg, Terneuzen, Tholen, Veere, Vlissingen and Woensdrecht.
- ~ *Waterleiding Maatschappij Noord-West-Brabant*
Aalburg, Alphen-Chaam, Baarle-Hertog, Baarle-Nassau, Bergen op Zoom, Breda, Dongen, Drimmelen, Etten-Leur, Geertruidenberg, Gilze and Rijen, Goirle (part), Halderberge, Heusden (part), Loon op Zand, Moerdijk, Oosterhout, Roosendaal, Rucphen, Steenbergen, Tholen (part), Tilburg (part), Waalwijk, Werkendam, Woensdrecht (part), Woudrichem and Zundert.
- ~ *Tilburgsche Waterleiding-Maatschappij*
Tilburg and Goirle. Supplies to a number of areas in Hilvarenbeek.

~ *Waterleidingmaatschappij Oost-Brabant*

Asten, Bergeyk, Bernheze, Best, Bladel, Boekel, Boxmeer, Boxtel, Cranendonck, Cuyk, Deurne, Eersel, Eindhoven, Geldrop, Gemert-Bakel, Grave, Haaren, Heeze-Leende, Helmond, 's-Hertogenbosch, Heusden (part), Hilvarenbeek, Laarbeek, Landerd, Lith, Maasdonk, Mierlo, Mill and Sint Hubert, Nuenen, St. Michielsgestel, St. Oedenrode, Oirschot, Oisterwijk, Oss, Ravenstein, Reusel-de Mierden, Schijndel, Someren, Son en Breugel, St. Antonis, Tilburg (part), Uden, Valkenswaard, Veghel, Veldhoven, Vught and Waalre. Supplies to a number of areas in Nederweert.

~ *Waterleidingmaatschappij Limburg*

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

~ *Nutsbedrijven Maastricht*

Maastricht.

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 to consumers.

~ *Production/produced*

The amount of water pumped by one or more pumping 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.

~ *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 end user, 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.
- ~ *Small scale users*
Consumers who use less than 300 m³ a year.
- ~ *Medium scale users*
Consumers who use between 300 m³ and 10,000 m³ a year.
- ~ *Large scale users*
Consumers who use more than 10,000 m³ a year.
- ~ *Drinking water activities*
In the VEWIN benchmark, drinking water activities are taken to mean all activities of water companies which eventually lead to the supply of drinking water to final users. The sales of drinking water activities include:
 - Income (standing charges and variable rate);
 - Debt recovery/fines;
 - Relocation contributions;
 - Income from rental of equipment and installations: e.g. sprinklers, fire extinguishing facilities, fire taps, standpipes, temporary connections, interior installations.
- ~ *Non-drinking water activities*
These are the activities that, for the sake of comparison of the outcomes between water companies, have not been included in the VEWIN benchmark:
 - Wholesale supply (delivery between water companies);
 - Supply of *other water*;
 - Realising connections and infrastructure works;
 - Laboratory activities for third parties;
 - Associated activities (including billing on the water bill, for instance, for the costs of energy supplier);
 - Exploitation of nature and recreation areas; such as income from camping sites, entrance fees for nature reserves, hunting fees, and such;
 - Subsidy acquisition;
 - Incidental activities.

Appendix 4

LITERATURE

1. VEWIN, Water Supply Statistics 1990-1999 (1991-2002).
2. VEWIN/Accenture, Reflections on Performance 2000, Benchmarking in the Dutch Drinking Water Industry (2001).
3. VEWIN, Overview of water charges on 1 January 2000 (2000).
4. VEWIN/NIPO, Dutch People Use Less Water (1999).

