VEWIN

Association of Dutch Water Companies

Water Supply Statistics 2004

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Association of Dutch Water Companies
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Introduction

Objective

Water Supply Statistics is an annual VEWIN publication containing basic data on Dutch drinking water to support sector policy making. Water Supply Statistics is also intended as a service to third parties such as ministries, the European Union, companies, institutions and consumers.

Collecting the data

Since 1997 most Dutch water supply companies have participated in the VEWIN benchmark report used to describe the performance of the companies concerned in terms of water quality, service level, environmental performance, finance and efficiency.

Since the year 2000, the administrative load on water companies has been reduced by gathering the water supply statistics data together with those for the benchmark report using the *Finance & Efficiency module*. A separate questionnaire applies to companies not participating in the voluntary benchmark report. The publication also contains tables whose data have been derived from other sources. The rates overview (Table 5), for instance, comes from the VEWIN publication *'Overview of water charges as of 1 January 2004'* (Tarievenoverzicht leidingwater per 1 januari 2004) and the overview of the breakdown of domestic water consumption (Table 6) comes from the VEWIN/NIPO report *'Domestic drinking water usage 2004'* (Watergebruik Thuis 2004).

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, 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 online

Water supply statistics are available on www.vewin.nl in Dutch and English.

Other VEWIN reports

Besides the Water Supply Statistics 2004, VEWIN also has other publications at its disposal with information about water companies such as:

- 'Annual Review of the Water Sector in the Netherlands' (Jaarboek voor de Watersector in Nederland);
- 'Reflections on Performance, Benchmarking in the Dutch drinking water industry' - 1997, 2000 and 2003;
- 'Overview of Water Charges as of 1 January 2005' (Tarievenoverzicht Leidingwater per 1 januari 2005);
- 'Water Quality Statistics' CD-rom (CD-rom Statistiek Waterkwaliteit).

The Benchmark report and the overview of water charges are PDF documents and can be downloaded from www.vewin.nl. For information about these publications and to submit orders contact VEWIN on +31 70 414 47 50 or e-mail vewin@vewin.nl.

Summary overview

	1994	1999	2003	2004
General				
number of water companies [1]	37	28	17	16
employees as full-time equivalents [2]	7,997	7,052	5,443	5,410
drinking water connections (x 1,000) [3]	5,961	6,655	7,287	7,343
% metered	92	91	96	96
Production (million m^3)				
drinking water				
own production	1,213	1,186	1,191	1,151
import balance and purchase from third parties	8	4	4	5
other water				
own production [4]	51	68	56	54
import balance and purchase from third parties	11	6	15	15
Sales (million m^3)				
drinking water				
small scale users	710	737	734	720
medium scale users	266	236	226	210
large scale users [5]	179	162	173	169
total [6]	1,155	1,134	1,132	1,099
water not charged [7]	66	56	59	53
other water [4]	61	74	71	69
Turnover (million euro) [8]				
drinking water				
small scale users	736	976	1,024	1,025
medium scale users	165	249	266	241
large scale users [5]	101	155	171	171
total [6]	1,003	1,379	1,461	1,437
other water [4]	21	29	29	31
Financial data (million euro)				
investments	483	504	433	408
taxes [9]	.	.	375	371
Infrastructure				
transport and mains supply network (x 1,000 km)	99	103	112	112

[1] Including Bronwaterleiding Doorn.
[2] Number of employees on payroll calculated as people working full-time.
[3] Since 2000 *administrative* connections, before 2000 *technical* connections. Definitions of technical and administrative connections are shown in appendix 2.
[4] Excluding production and supply by subsidiary and associate companies (approximately 70 million m^3 in 2004).
[5] Including drinking water delivered under non-drinking water contracts.
[6] Excluding mutual deliveries *(wholesale)* and export.
[7] Think of leakage, cleaning losses, firewater and measuring differences.
[8] Consists of compensations for the variable rate, standing charges and/or charges for available capacity. Exclusive of VAT and tap water tax.
[9] A specification is given in table 9.

Chapter 1 The water companies

~ *General*

A number of general characteristics of the water companies operating in the Netherlands at the end of 2004 are shown in Table 1. Figure 1 shows the relevant supply areas.

~ *Legal structure*

With the exception of Waterleidingbedrijf Amsterdam (municipal company), all companies are limited liability companies with associated municipalities and provincial bodies functioning as shareholders. At the beginning of 2004, the private company with limited liability Delta Drinkwater was also in operation, being a full subsidiary of multi-utility company Delta NV. As of 1 July 2004 Delta's water interests merged with Waterbedrijf Europoort creating Evides NV. This merger became effective on 1 January 2004 retroactively.

~ *Characterisation*

Watertransportmaatschappij Rijn-Kennemerland and Waterwinningsbedrijf Brabantse Biesbosch do not distribute drinking water themselves but deliver partly treated water *(other water)* to associate companies. All other companies both produce and distribute drinking water, with some also supplying *other water* (Table 3).

Figure 1 Supply areas on 31-12-2004 [1)]

[1)] Appendix 1 shows the relevant municipalities associated with each supply area.

Table 1 Overview of the water companies on 31-12-2004 [1)]

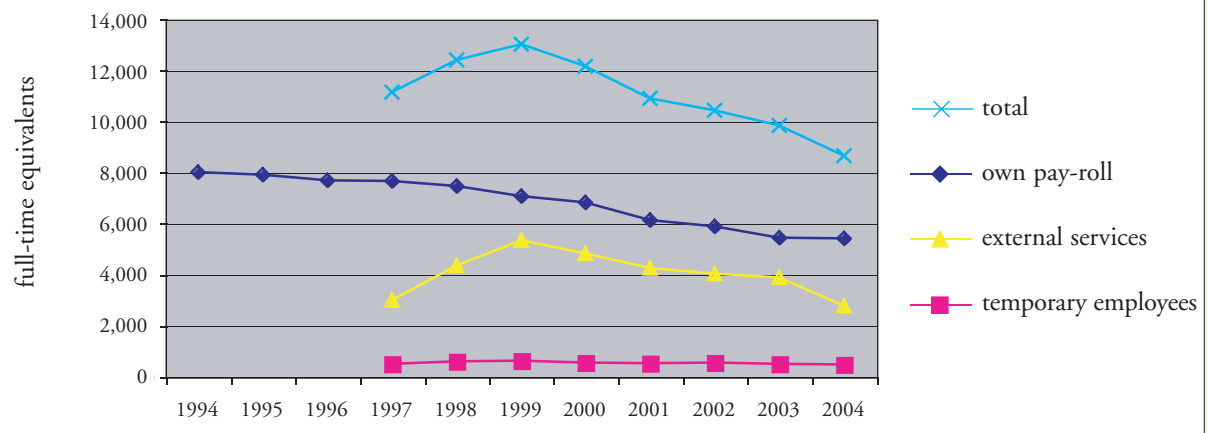
Water company	code name	em-ployees (fte)[2)]	sales in supply area	administrative connections	inhabitants in supply area
			1,000 m³	*x 1,000*	
Waterbedrijf Groningen	WBGR	220	43,173	271	575
Waterleidingmaatschappij Drenthe	WMD	169	29,070	189	431
Vitens	Vitens	1,033	241,480	1,614	3,810
PWN Waterleidingbedrijf Noord-Holland	PWN	531	102,878	709	1,617
Waterleidingbedrijf Amsterdam	WLB	542	67,148	476	887
Watertransportmaatschappij Rijn Kennemerland [3)]	WRK	-	-	-	-
Duinwaterbedrijf Zuid-Holland	DZH	505	70,493	577	1,177
Evides [4)]	Evides	508	167,326	968	1,952
Hydron Zuid-Holland	Hydron-ZH	219	47,359	318	743
Hydron Flevoland	Hydron-Fl	89	18,457	124	303
Hydron Midden-Nederland	Hydron-MN	382	74,635	551	1,190
Brabant Water	Brabant Water	702	151,904	941	2,177
Tilburgsche Waterleiding-Maatschappij	TWM	78	12,734	92	200
Waterwinningbedrijf Brabantse Biesbosch [5)]	WBB	-	-	-	-
Waterleidingmaatschappij Limburg	WML	433	72,734	513	1,136
The Netherlands		**5,410**	**1,099,391**	**7,343**	**16,199**

[1)] In addition to the overview the NV Bronwaterleiding Doorn was also in operation in the year under review. This publication does not include data on this company which has an annual drinking water supply of around 1 million m³.
[2)] Full-time equivalents on own pay-roll.
[3)] As of 1 January 2003 WRK's work is carried out by WLB and PWN staff. WRK has remained contract holder and owner.
[4)] On 1 July 2004 WBE and Delta merged into Evides NV. The merger became effective retroactively on 1 January 2004.
[5)] As of 1 january 2004 WBB's work is carried out bij WBE (at present Evides) for the next 15 years. WBB has remained contract holder and owner.

~ *Employment*

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 performing their work with steadily fewer people. The number of employees on the payroll of water companies dropped from 7,997 ftes in 1994 to 5,410 ftes in 2004 (-32,3%). Since 1999 the purchase of external services also declined considerably: converted to ftes, external services purchases amounted to 5,323 in 1999, compared to no more than 2,769 in 2004 (-48%). Since 1997 the number of temporary staff has fluctuated between 475 and 627.

Figure 2 Employment 1994 - 2004



Chapter 2 Water production

~ *Water balance*

Figure 3 shows the water balance for the year 2004. 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 water companies themselves *(wholesale supply)*.

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

~ *Water extraction*

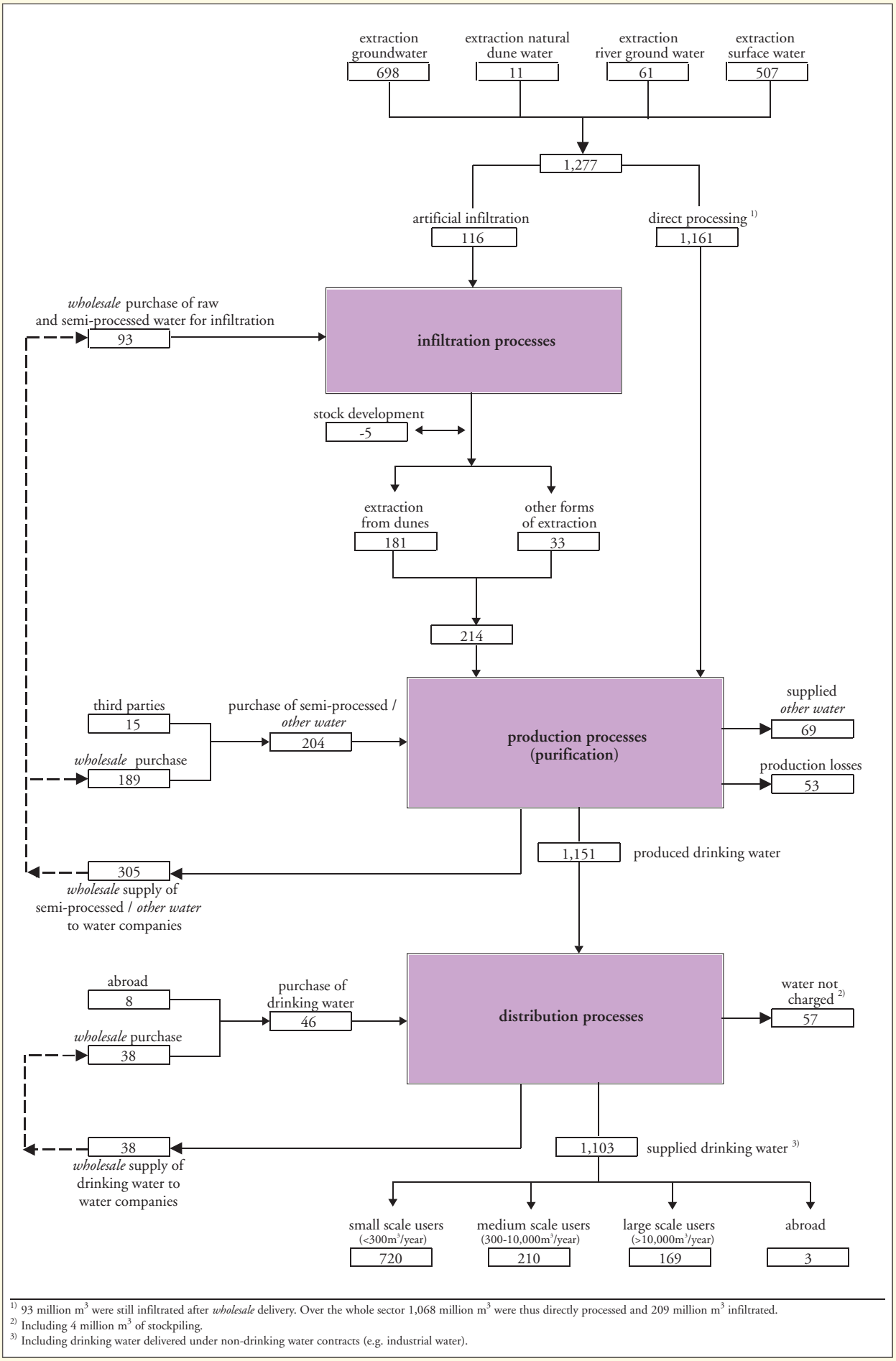
At the top of the water balance the quantities of water extracted are indicated per type of raw water source. In Table 2 these figures are specified per water company, while Figure 4 shows water extraction as of the year 1994. The use of surface water increased by 4.1 percentage points over the past ten years to 39.7% in 2004. At the same time the use of river groundwater and groundwater dropped by 2.8 percentage points to a share of 59.4% 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 of drinking water and *other water* produced by water companies. The development of the sector's total production amount over the past ten years is displayed in Figure 5. In 2004 the water companies together produced 1,151 million m^3 of drinking water. This means a decrease in production of 61 million m^3 compared to the production level ten years ago (-5.1%). Compared to 2003 production dropped from 1,191 million m^3 to 1,151 million m^3. This major decline is related to a remarkably hot and dry summer in 2003, which resulted in exepetionally high water consumption in that particular year.

Other water implies water which is not of drinking water quality. Usually this concerns applications requiring less drastic purification, but it may also refer to applications requiring precisely more drastic treatment (e.g. demi-water). In 2004 production of this *other water* amounted to 54 million m^3, 2.6% less than in 2003. Figure 6 shows production was thus almost identical to that of 1994. It should be noted that since the early 1990s a number of drinking water companies have assigned *'other water activities'* to subsidiaries and sister companies. In 2004 the subsidiaries and sister companies produced yet another 70 million m^3 for the Dutch market.

Figure 3 Water balance 2004 (in millions m³)



1) 93 million m³ were still infiltrated after *wholesale* delivery. Over the whole sector 1,068 million m³ were thus directly processed and 209 million m³ infiltrated.
2) Including 4 million m³ of stockpiling.
3) Including drinking water delivered under non-drinking water contracts (e.g. industrial water).

Table 2 Water extraction 2004

company	groundwater	river groundwater	natural dune water	surface water	total
	million m³				
WBGR	41	-	-	21	61
WMD	31	-	-	-	31
Vitens	260	-	1	-	260
PWN	5	-	0	26	31
WLB	-	-	10	28	38
WRK	-	-	-	150	150
DZH	-	-	-	74	74
Evides	20	-	-	7	27
Hydron-ZH	5	43	-	-	48
Hydron-Fl	28	-	-	-	28
Hydron-MN	73	-	-	-	73
Brabant Water	166	1	-	-	167
TWM	13	-	-	0	13
WBB	-	-	-	203	203
WML	57	17	-	-	74
The Netherlands	**698**	**61**	**11**	**507**	**1,277**

Table 3 Water production 2004

company	drinking water	other water [1]	total
	million m³		
WBGR	47	13	61
WMD	30	-	30
Vitens	253	-	253
PWN	89	-	89
WLB	89	1	90
WRK	-	150	150
DZH	77	0	77
Evides	177	-	177
Hydron-ZH	46	-	46
Hydron-Fl	20	9	28
Hydron-MN	77	-	77
Brabant Water	162	3	165
TWM	13	-	13
WBB	-	184	184
WML	72	-	72
The Netherlands total	**1,151**	**359**	**1,511**
wholesale delivery or *other water*		305	305
net production	1,151	54	1,205

[1] Excluding production by subsidiaries and associate companies (approximately 70 million m³).

Figure 4 Water extraction 1994 - 2004

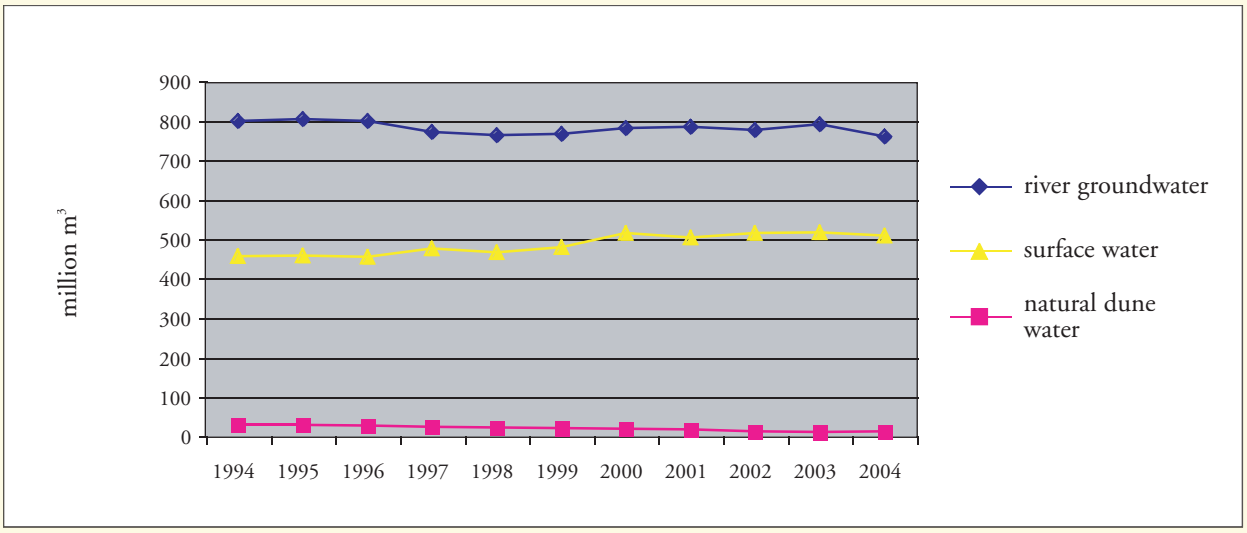


Figure 5 Production of drinking water 1994 - 2004

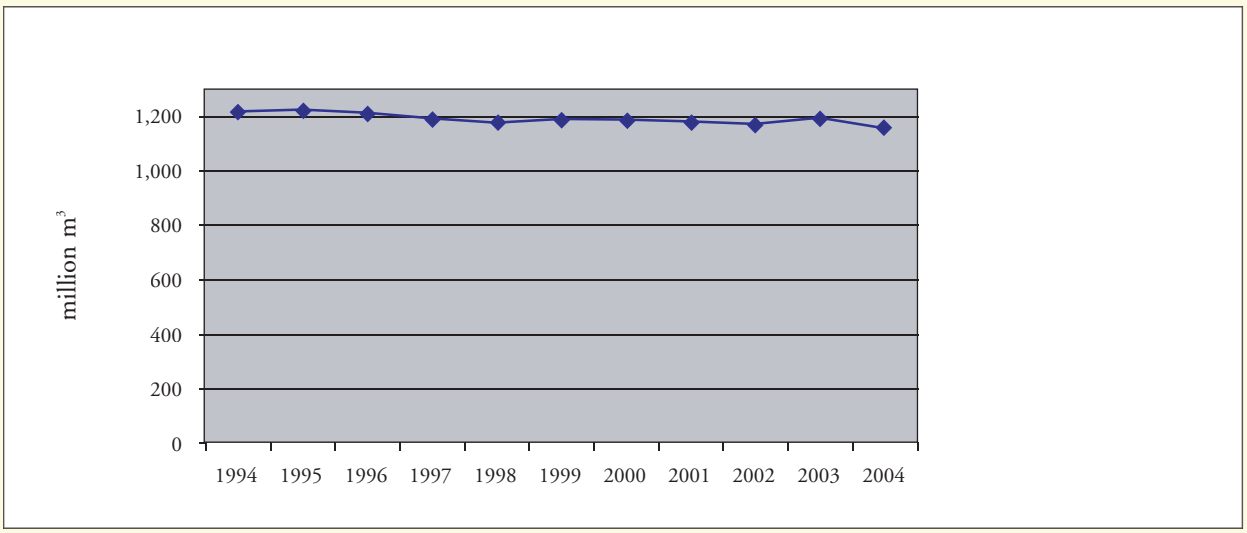
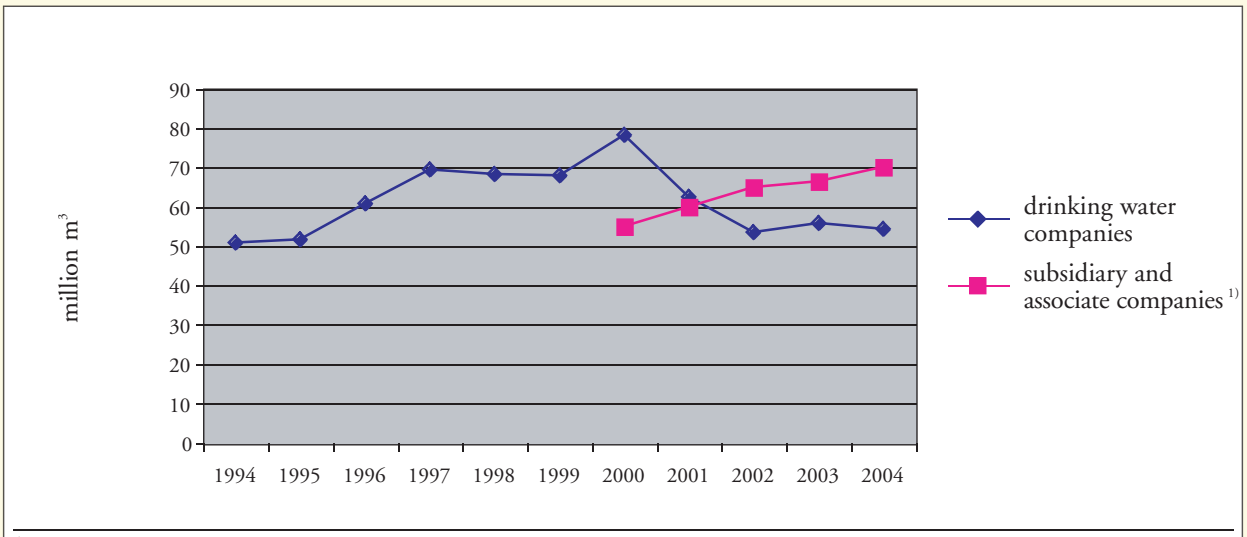


Figure 6 Production of other water 1994 - 2004



[1] Data available from 2000 onwards.

Chapter 3 Water sales

~ *Water sales 2004*

The water balance 2004 (Figure 3) shows the deliveries of drinking water and *other water* at national level. This chapter shows the turnover and number of connections related to the deliveries. These figures are 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^3.

Table 4 Summary of water sales 2004

	connections [1]	sales	average supply per connection	turnover [2]	average price [2]
		million m^3	*m^3/connection*	*million €*	*€ /m^3*
drinking water					
end users	7,343,018	1,099	150	1,437	1.31
of whom small scale users	7,061,918	720	102	1,025	1.42
medium scale users	275,830	210	761	241	1.15
large scale users [3]	5,270	169	32,114	171	1.01
wholesale sales	.	38	.	22	0.59
exports	.	3	.	.	.
other water					
end users [4]	328	69	211,240	31	0.45
wholesale sales	.	305	.	35	0.12
exports	-	-		-	
total					
end users	7,343,346	1,169	159	1,468	1.26
wholesale sales	.	343	.	57	0.17
exports	.	3	.	.	.

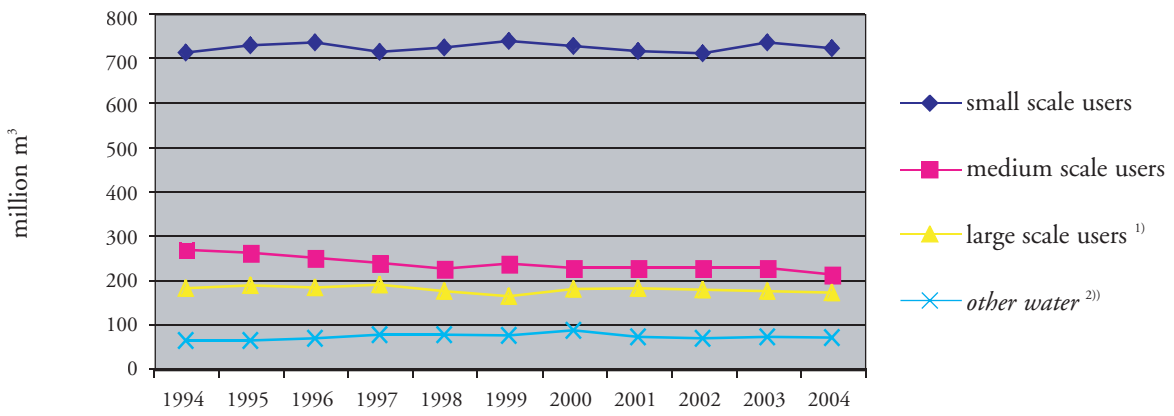
1) Administrative connections for drinking water, technical connections for *other water*.
2) Comprises the variable rate and the standing charges and/or compensation for available capacity. Exclusive of VAT and tap water tax.
3) Including drinking water delivered under non-drinking water contracts.
4) Excludes sales by subsidiaries and associate companies (approximately 70 million m^3).

~ *Sales development*

Over the previous century, Dutch drinking water sales showed a considerable increase, up from approximately 300 million m^3 in 1950 to 1,166 million m^3 in 1990. Sales levels remained reasonably stable between 1990 and 1995 before slowly declining to 1,099 million m^3 in 2004. An exception to this trend was the temporary increase in 2003 (1,132 million m^3) due to an exceptionally hot and dry summer. Figure 7 indicates the water sales development for the different consumer groups over the past ten years. It shows that the decline in sales primarily occured among medium scale users. Among others this was due to agriculture companies providing their own water and to a decrease of the stock of cattle.

In 2004 *other water* sales decreased by 2 million m^3 to 69 million m^3 (-2%). Compared to 1994 *other water* sales rose by 8 million m^3 (+13%). Note that in 2004 water companies' subsidiaries and sister companies sold another 70 million m^3 of *other water* on the Dutch market.

Figure 7 Sales in own supply area 1994 - 2004



1) Including drinking water supplied under non-drinking water contracts.
2) Exclusive of supply by subsidiaries and associate companies.

Figure 8 Turnover from own supply area 1994 - 2004

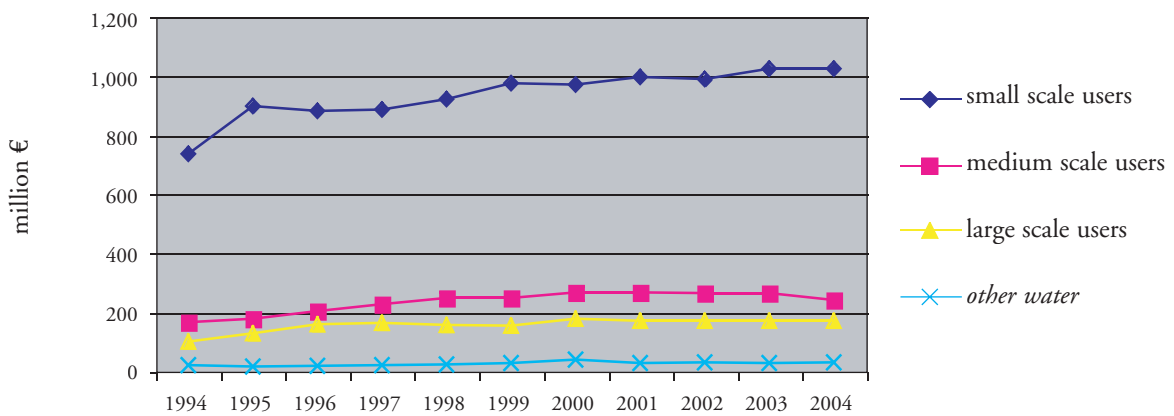
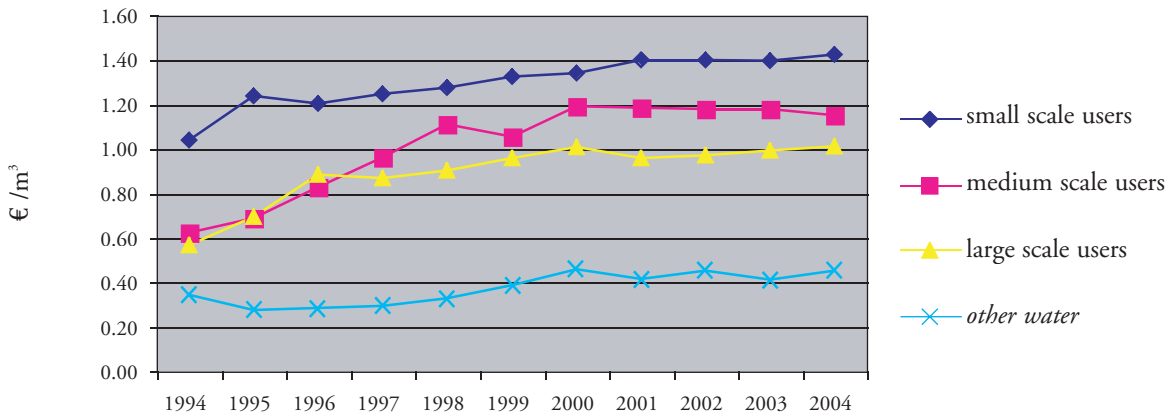


Figure 9 Price development per customer group 1994 - 2004 [1)]



1) Prices calculated by dividing turnover (€) by sales (m^3).

~ *Turnover and price development*

Figure 8 shows the turnover development for water supply for each consumer group. The total turnover of drinking water and *other water* rose from € 1,024 million in 1994 to € 1,468 million in 2004. The average prices per consumer group are shown in Figure 9.

In 2004 prices for households and large scale business users rose by € 0.02 to € 1.42 and € 1.01 per m^3 respectively; the price for medium scale consumers decreased by € 0.03 to € 1.15 per m^3. On average the drinking water price increased by 2 cents reaching € 1.31 per cubic metre (+1.3%). The price of *other water* rose from € 0.41 to € 0.45 per cubic metre (+10%).

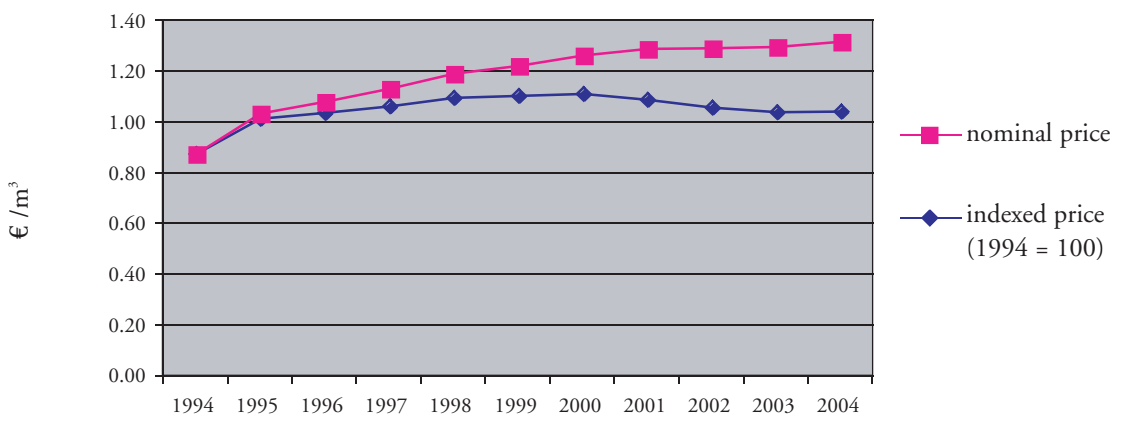
Looking at the previous decade the average drinking water price per cubic metre (for all consumer groups together) rose from € 0.87 in 1994 to € 1.31 in 2004 (+50%); the price of *other water* went up from € 0.34 to € 0.45 (+32%).
Figure 10 shows the development of the water price compared with prices adjusted for inflation (1994=100). Over the last ten years, the increase of the consumer price index was 26.5%. The drinking water price for 2004 adjusted for inflation is thus (1.31*100/126.5=) € 1.04/m^3. This means that (out of 44) 27 cents (1.31 -/- 1.04) of the price growth since 1994 can be explained by inflation. Another 12 cents was caused by the groundwater tax introduced in 1995 (Table 9).

Since the introduction of the VEWIN benchmark (reference year 1997, € 1.12/m^3), the average drinking water price rose by less (+16%) than the consumer price index (+19%). For more information on the VEWIN benchmark, refer to the report *'Reflections on Performance, Benchmarking in the Dutch Drinking Water Industry 2003'*.

~ *Rates*

On average, for the year 2004, 3/4 of a domestic water bill consisted of a variable volumetric rate and 1/4 consisted of a fixed rate (standing charge). Only one company applied a fully variable rate. Table 5 shows the drinking water rates for each supply area, extracted from the VEWIN publication 'Overview of water charges as of 1 January 2004' *(Tarievenoverzicht Leidingwater per 1 januari 2004)*. The outcome in the total column was calculated using the standing charges and the volumetric rate, indicating the average drinking water price per m^3 for a standard family (2.28 individuals) with average consumption (46 m^3/individual/year).

Figure 10 Average drinking water price 1994 - 2004 [1)]



[1)] The nominal price is calculated by dividing turnover (€) by sales (m^3). The indexed price is the nominal price after adjustment for inflation (1994=100)

Table 5 Rates of drinking water to households per supply area 2004 [1)]

company	standing charge	*volumetric* rate	total per m^3 [2)]
	€		
WBGR			
Province	11.40	0.99 [3)]	1.01
City	18.36	1.17 [4)]	1.24
WMD	37.25	0.90	1.25
Vitens			
Friesland	30.00	1.10	1.39
Overijssel	18.64	1.16	1.34
Gelderland			
Arnhem, Nijmegen, Apeldoorn etc.	28.00	0.99	1.25
Other municipalities	19.73	1.12	1.31
PWN	40.57	1.24	1.62
WLB			
General	38.88	1.28	1.65
Amstelveen	23.40	1.28	1.50
DZH			
General	41.20	1.29	1.68
Den Haag	57.45	1.29	1.84
Leiden	71.55	1.29	1.97
Warmond	49.50	1.29	1.76
Rijnwoude	46.76	1.29	1.74
Leidschendam-Voorburg	47.17	1.29	1.74
Evides			
Former WBE supply area	62.88	1.00	1.60
Former DELTA supply area	50.28	1.10	1.58
Putte, Ossedrecht, Woensdrecht etc.	43.80	0.86	1.28
Hydron-ZH	69.94	1.25	1.92
Hydron-Fl	-	1.30	1.30
Hydron-MN	23.64	0.97	1.20
Brabant Water			
General	38.40	0.86	1.22
Baarle Hertog	38.40	1.22 [5)]	1.18
TWM			
Tilburg	30.72	0.90	1.19
Goirle	30.72	0.88	1.17
WML			
General	15.90	1.37	1.52
Maastricht	19.06	1.37	1.55

1) Metered houses. Exclusive 6% VAT and tap water tax (€ 0.144/m^3), including groundwater tax. Standing charges include distribution and concession reimbursements.
2) The total price per m^3 is calculated from the standing charge and the volumetric rate for an average family of 2.28 individuals (CBS, 2004) and average consumption per individual of 46 m^3 a year (VEWIN/NIPO, 2004). Calculation: (standing charge + 2.28 x 46 x volumetric rate) / (2.28 x 46).
3) Up to 9 m^3 per connection nil, more than 9 m^3 € 0.99.
4) Up to 9 m^3 per connection nil, more than 9 m^3 € 1.17.
5) Up to 15 m^3 per individual nil, more than 15 m^3 € 1.215.

Subsequent to the consolidation process that has taken place in the water sector, many companies are now harmonising their rates in the various sub-areas. Water rates in the sub-areas may also vary because some municipalities levy distribution and concession reimbursements charged on to the people living in those areas. In Table 5 these levies are incorporated in the standing charges.

~ *Domestic drinking water consumption by application*

Every three years VEWIN surveys the Dutch population on domestic water usage. Table 6 shows the main outcomes of the last survey held in 2004. The main uses of domestic drinking water are the shower (35%), the toilet (29%) and the washing machine (15%). Domestic water consumption per head per day between 1995 and 2004 dropped by about ten per cent. This decline is expected to continue, inter alia because of growing penetration of low-water-use toilets and washing machines.

Until today the effect of the decrease of the per capita water usage has mostly been compensated by an increase in the Dutch population.

Table 6 Breakdown of domestic water consumption 1995 - 2004

	1995	1998	2001	2004 [1)]
	litre/person, day			
bath	9.0	6.7	3.7	2.8
shower	38.3	39.7	42.0	43.7
washbasin	4.2	5.1	5.2	5.1
toilet flush	39.0	36.2	34.8	35.8[1)]
washing, by hand	2.1	2.1	1.8	1.5
washing, by machine	25.5	23.2	22.8	18.0
washing up, by hand	4.9	3.8	3.6	3.9
washing up, by machine	0.9	1.9	2.4	3.0
food preperation	2.0	1.7	1.6	1.8
drinking coffee, thea and water	1.5	1.5	1.5	1.6
other	6.7	6.1	6.7	6.4
total	134.1	127.9	126.2	123.8

[1)] In 2004 the extend to which flush breaks are used is taken into account. Related to the cases in which there is a flush break at one's disposal, it is only actually used in 69% of the cases. If the outcomes of the previous years would also be adjusted, then water consumption in these years would be lower than presented (in 1995, 1998 and 2004 resp. about 3, 4 en 4.5 litres per person per day lower).

Chapter 4 Financial data

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

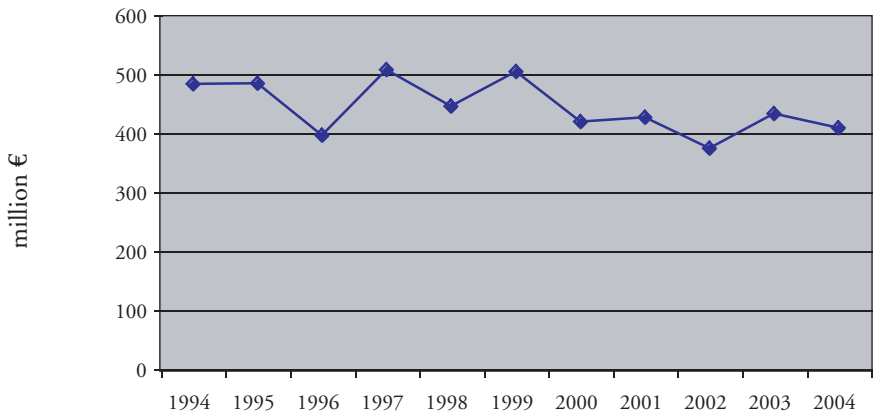
~ *The balance sheet*

Table 7 shows the balance sheet of the Dutch water sector. This was created by aggregating individual company figures, most of which were valued at historical cost price. Total balance sheet assets end 2004 were € 6.0 billion, of which € 1.4 billion (23.4%) was financed by own capital, € 3.8 billion (63.3%) by loans and € 0.8 billion (13.3%) by other capital (contributions from third parties and provisions).

Table 7 Financial balance sheet on 31-12-2004 (million €)

Assets		Liabilities	
fixed assets		*shareholders' equity*	
- tangible fixed assets	5,548	- share capital	37
- intangible fixed assets	25	- reserves	1,368
- financial fixed assets	102		
- total	5,675	*other capital*	
		- contibutions from third parties	588
		- provisions	212
current assets		*long-term loan capital*	2,796
- stocks	19		
- account receivables/debtors	284	*short-term loan capital*	
- liquid assets/cash	25	- loans	456
- total	328	- creditors	161
		- advances	28
		- other	357
		- total	1,002
total	6,003	**total**	6,003

Figure 11 Development of investments 1994 - 2004 [1)]

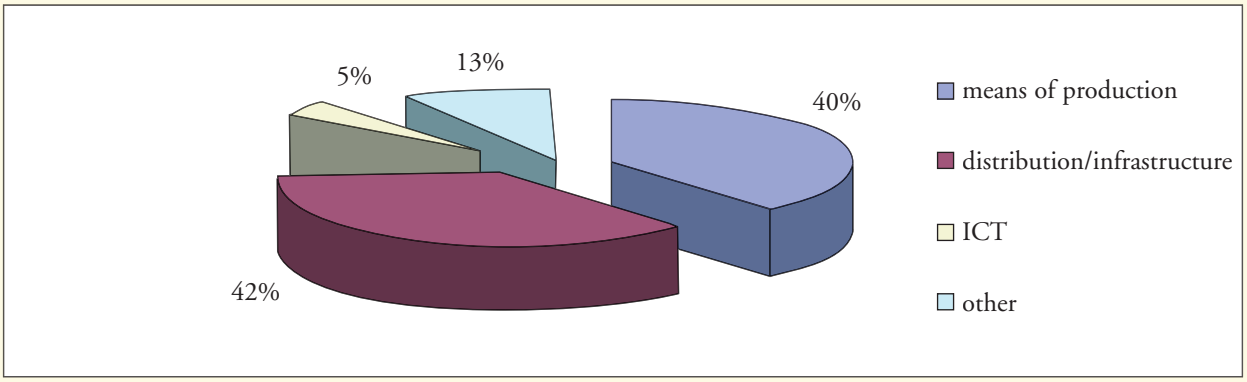


[1)] Without correction of individual results for differences in activation policy.

~ *Investments*

Figure 11 shows the development of water companies' investments. Investments have declined from € 483 euro in 1994 to 408 million euro in 2004 (-15%). In 2004 42% of the investments went to the distribution processes, 40% to production and 5% to information and communication technology.

Figure 12 Investments by process 2004



~ *Taxes*

Table 8 shows the development in rates of the national ground water tax and tap water tax. Both are based on the Environmental Resource Tax Act (Wet Belastingen op Milieugrondslag). The Table does not include the provincial groundwater levies persuant to the Ground Water Act (Grondwaterwet) nor distribution and concession refunds. The provincial groundwater levies vary per province whereas distribution and concession refunds vary per municipality. The latter are only levied in a limited number of places.

Table 8 Water tax rates under the Water Resource Tax Act, 1995 - 2004

	1995 - 1998	1999	2000	2002	2003	2004
	euro-cent/m³					
groundwater tax						
normal rate	15.4	15.8	16.0	16.82	17.43	17.85
infiltration discount [1]	12.7	13.2	13.4	14.09	14.6	14.95
tap water tax [2]			12.9	13.6	14.1	14.4

[1] Discount on normal rate in case of prior infiltration (Water Resource Tax Act, article 6).
[2] 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 m³.

The average tax load resulting from the provincial groundwater levies and the distribution and concession refunds is determined by dividing the paid tax amounts by the total drinking water supplied to end users (1,099 million m³, see Table 4). Table 9 shows the outcomes of this, along with other taxes.
Allocated over the total drinking water supply, the provincial groundwater levy amounts to 1.1 cent/m³; distribution and concession refunds to 0.8 cent/m³.

Table 9 shows that the total tax load in 2004 was € 371 million, € 364 million of which was allocated to drinking water, equivalent to € 0.33 per cubic metre delivered.

The drinking water taxes include € 155 million (€ 0.14/m³) from cost-price increasing taxes and € 209 million (€ 0.19/m³) from tap water tax and VAT. Tap water tax and VAT are collected from consumers by the drinking water companies on behalf of the government. Although consumers pay these taxes to the water company (on top of the water price charged), they do not form part of companies' turnover.

Table 9 Taxes 2004

	total levy	drinking water share [1] levy	levy per m³ [2]
	million €		*€ /m³*
direct taxes (cost-price increasing)			
national groundwater tax	138	134	0.12
provincial groundwater levy	13	12	0.01
distribution and concession reimbursements	9	8	0.01
total	160	155	0.14
indirect taxes			
tap water tax [3]	116	116	0.11
VAT on water sales [4]	88	86	0.08
VAT on tap water tax [5]	7	7	0.01
total	211	209	0.19
total	371	364	0.33

[1] The drinking water share has been calculated. On calculation of the direct taxes the outcomes of the 2004 benchmark were used, which differentiates drinking water activities and non-drinking water activities. The share of drinking water activities in taxes amounts to 97.0% for the national groundwater tax, 96.6 % for the provincial groundwater levy and 95.8% for piping and concession reimbursements. The calculation of the indirect taxes is shown in footnotes 3 to 5.
[2] The drinking water levy calculated in the previous column divided by the drinking water supplied to end users (1,099 million m³).
[3] Levy estimated as follows: supply of small scale drinking water x rate for tap water tax (€ 0.144 / m³) + medium scale and large scale administrative connections for drinking water x 300 m³ 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 end users x 6% and income from drinking water delivered to end users x 6% respectively.
[5] Calculated as follows: previously calculated tax on tap water x 6% (VAT is also levied over tax on tap water).

Table 10 shows the effect of these taxes on the average Dutch drinking water price. The drinking water tariff (€ 1.31/m³) consists of taxes for almost 11% (€ 0.14/m³) and the total price (€ 1.50/m³ including VAT and tap water tax) for 22% (€ 0.33/m³).

Table 10 Average drinking water price in the Netherlands 2004

	€ /m³	*share in total price*
reimbursement for the water company	1.17	78.0%
cost-price increasing taxes	0.14	9.3%
average tariff	*1.31*	
tap water tax and VAT	0.19	12.7%
total amount due for average buyer	*1.50*	

Table 11 represents the build-up of the average drinking water price for the small scale sector only. Small scale consumers (sales < 300 m³) pay tap water tax on their entire consumption. Consequently the tax pressure for this consumption group (€ 0.38 per m³) exceeds the average tax pressure of all consumer groups in The Netherlands together (€ 0.33 per m³).

Table 11 Average drinking water price for small scale consumers 2004

	€ /m³	*share in total price*
reimbursement for the water company	1.28	77.2%
cost-price increasing taxes	0.14	8.5%
average tariff	*1.42*	
tap water tax and VAT [1)]	0.24	14.3%
total amount due for average buyer	*1.66*	

[1)] € 0.144 + 6% BTW over (€ 1.42 + € 0.144)

Chapter 5 Infrastructure

Table 12 and 13 present an overview of the length and structure of the transport and mains supply network as of 31 December 2004. The development of the network length and the most frequently used materials (asbestos cement, PVC and cast iron) are shown in Figure 13. In this Figure, all other materials are referred to by 'other'.

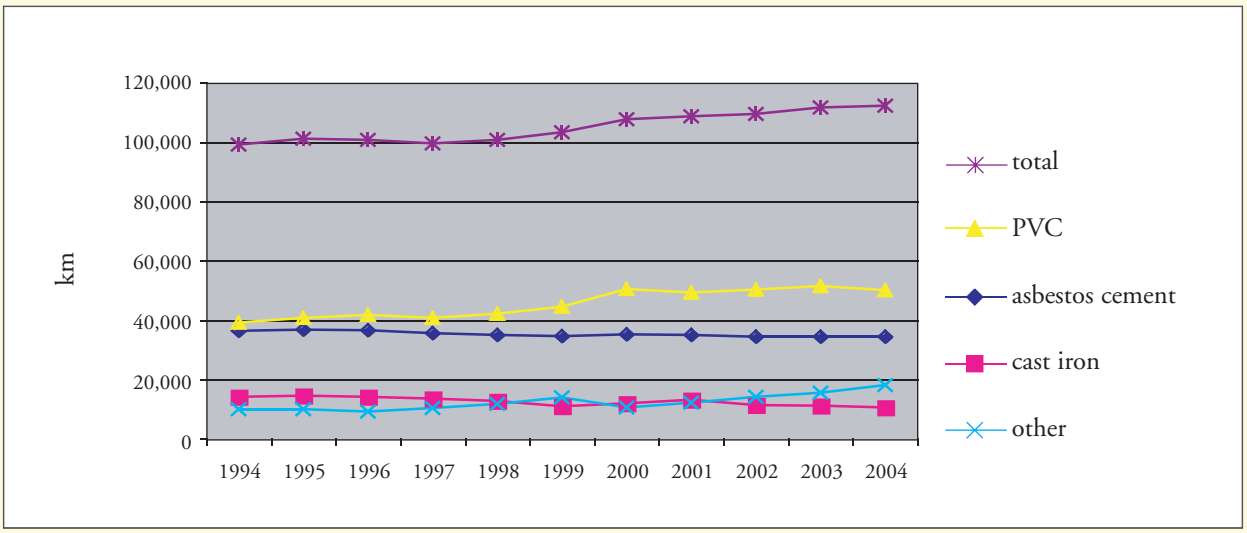
Table 12 Network length on 31-12-2004

company	total
	kilometre
WBGR	4,713
WMD	4,175
Vitens	35,124
PWN	9,651
WLB	2,691
WRK	332
DZH	4,446
Evides	12,344
Hydron-ZH	4,062
Hydron-Fl	2,234
Hydron-MN	6,284
Brabant Water	16,736
TWM	811
WBB	25
WML	8,520
The Netherlands	**112,147**

Table 13 Network structure on 31-12-2004

material	total
	kilometre
asbestos cement	34,084
cast iron	10,360
nodulair cast iron	2,744
steel	2,730
concrete	991
PVC	49,778
polyethene (PE)	7,299
glasfibre reinforced synthethics	40
other	4,121
The Netherlands	**112,147**

Figure 13 Development of length and structure of the transport and mains supply network 1994 - 2004



Appendix 1

SUPPLY AREAS WITH RELATED MUNICIPALITIES IN 2004

Waterbedrijf Groningen

All Groningen municipalities and in the province of Drenthe the municipality of Tynaarloo (Eelde-Paterswolde).

Waterleidingmaatschappij Drenthe

Aa and Hunze, Assen, Borger-Odoorn, Coevorden, De Wolden, Emmen, Hoogeveen, Midden-Drenthe, Noorderveld, Westerveld (partly), Tynaarlo (partly) and Meppel (area outside). Supplies also to the municipalities of Leek, Veendam and Hoogezand/Sappemeer.

Vitens

The provinces of Friesland, Gelderland, Overijssel, the Noordoostpolder and to the municipalities of Meppel and of Westerveld (partly), both in the province of Drenthe.

PWN Waterleidingbedrijf Noord-Holland

Aalsmeer, Akersloot, Alkmaar, Amstelveen (partly), Andijk, Anna Paulowna, Beemster, Bennebroek, Bergen (NH), Beverwijk, Blaricum, Bloemendaal, Bussum, Castricum, Drechterland, Edam-Volendam, Egmond, Enkhuizen, Graft-de Rijp, 's-Graveland, Haarlem, Haarlemmerliede & Spaarnwoude, 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, Loosdrecht, Muiden and Warmond.

Waterleidingbedrijf Amsterdam

Amstelveen (built-up area), 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 (exclusive Wateringseveld), Hillegom, Katwijk, Leiden, Leidschendam-Voorburg, Lisse, Nesselande (municipality Rotterdam), Nieuwerkerk a/d IJssel, Noordwijk, Noordwijkerhout, Oegstgeest, Pijnacker-Nootdorp, Rijnsburg, Rijnwoude (centre Benthuizen), Rijswijk, Sassenheim, Valkenburg, Voorhout, Voorschoten, Warmond, Wassenaar, Zevenhuizen-Moerkapelle and Zoetermeer.

Evides

Albrandswaard, Barendrecht, Bernisse, Bergen op Zoom (Halsteren), Binnenmaas, Borsele, Brielle, Capelle a/d IJssel, Cromstrijen, Delft, Den Haag (Wateringseveld), Dirksland, Dordrecht, Goedereede, Goes, 's-Gravendeel, Hellevoetsluis, Hulst, Kapelle, Korendijk, Maassluis, Middelburg, Middelharnis, Midden-Delfland, Noord-Beveland, Oostburg, Oostflakkee, Oud-Beijerland, Reimerswaal, Rotterdam, Rozenburg, Schiedam, Schouwen-Duiveland, Sluis, Spijkenisse, Strijen, Terneuzen, Tholen, Veere, Vlaardingen, Vlissingen, Westland, Westvoorne, Woensdrecht and Zwijndrecht (Heerjansdam).

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 (exclusive Benthuizen), 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, IJselstein and Zeist. Supplies to a number of areas in Kortenhoef.

Bronwaterleiding Doorn

Doorn.

Brabant Water

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

Tilburgsche Waterleiding-Maatschappij

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

Waterleidingmaatschappij Limburg

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

Appendix 2

SIGNS AND DEFINITIONS

Signs

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

Definitions

~ *Water company*

a. a company providing drinking water for consumers;
b. a company providing *wholesale* drinking water on a large scale to companies referred to under **a.**;
c. a company providing drinking water for consumers and *wholesale* drinking water to companies as referred to under **a.**

~ *Drinking water*

Water (partially) destined for human consumption.

~ *Other water*

Water of different quality than drinking water. For instance non-filtered, semi-filtered water as well as distilled and demineralised water.

~ *Industrial water*

Water intended for industrial processes and which is not destined to drink. Industrial water can be of drinking water quality or of *other water* quality.

~ *Supply area*

The municipal areas or part(s) of these where a water company delivers and invoices water.

~ *Production*

The amount of water pumped by treatment plants into the network.

~ *Wholesale delivery*

Deliveries between water companies.

~ *Third parties*

Companies or institutions that are not water companies.

~ *Natural dune water*

Groundwater naturally present in the dunes. Water supplied by man from external sources for treatment here (artificial infiltration) is not considered natural dune water.

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

- *Direct processing*
  Production of water without prior artificial infiltration.

- *River groundwater*
  Water extracted from the ground that is physically close to open water or a river and besides groundwater, consists of at least 10% infiltrated surface water.

- *Technical connection*
  The technical connection is the pipe between the mains network and the consumer, including water metre (if present).

- *Administrative connection*
  An administrative connection is taken to mean the premises to a technical connection (e.g. an apartment). A collective (technical) connection may include 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 using less than 300 m^3 a year.

- *Medium scale users*
  Consumers using between 300 m^3 and 10,000 m^3 a year.

- *Large scale users*
  Consumers using more than 10,000 m^3 a year.

Appendix 3

LITERATURE

1. VEWIN, Water Supply Statistics 1994-2003 (1995-2004).

2. VEWIN/Accenture, Reflections on Performance 2003, Benchmarking in the Dutch Drinking Water Industry (2004).

3. VEWIN, Overview of Water Charges as of 1 January 2004 (2004).

4. VEWIN/NIPO, Domestic drinking water usage 2004.