



Offer to subscribe to up to EUR 15 million in New Shares with VVPR strips

The Lead Manager has an Overallotment Option for an amount of up to EUR 2.25 million in Existing Shares

The Offering consists of a public offering in Belgium and a private placement with institutional investors in Belgium and Europe.

An application has been submitted to list on Alternext Brussels all the shares of the Company (including any shares that may be issued upon exercise of existing warrants).

The Offering Period runs from 6 June to 20 June 2007,
subject to early closing.

Sole Lead Manager, Bookrunner & Listing Sponsor



Warning

An investment in shares of Ecodis involves risks, as explained in the «Risk factors» section at the beginning of this Prospectus. More specifically potential investors should pay attention to the sections “Risks attached to the financial structure and profitability” and “Risks attached to the protection of intellectual property rights”. Alternext Brussels is a market segment of Euronext Brussels for which regulation is less strict than for Eurolist by Euronext, given that it is not a regulated market within the meaning of article 2, 3 of the Act of 2 August 2002 concerning the supervision of the financial sector and financial services. This means that it does not present the same guarantees to the public in terms of supervision and information as a regulated market.

The present document is the translation in English of the prospectus in Dutch. The prospectus in Dutch is the only document which forms legal evidence. The board of directors of Ecodis assumes the responsibility for the translation of the prospectus in Dutch. The prospectus in Dutch may be obtained free of charge at the registered office of Ecodis and the various offices of the Lead Manager.

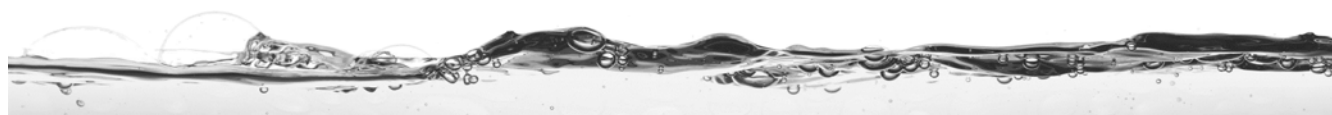
Prospectus dated 29 May 2007

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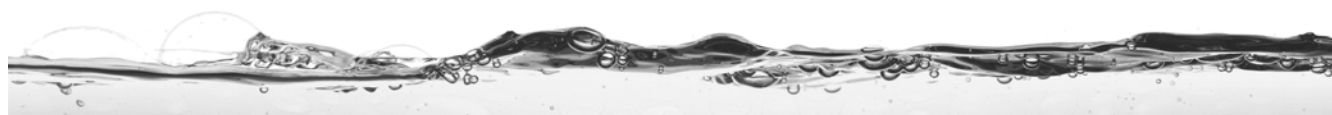
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Summary

This summary is not intended to be complete and should be read as an introduction to the more detailed information provided elsewhere in this Prospectus. It contains selected information about Ecodis and the Offering. It does not contain all the information that may be important for investors. This summary must be read together with, and is qualified in its entirety by, the more detailed information and the consolidated financial statements and notes thereto appearing elsewhere in this Prospectus. It should also be read together with the matters set forth under “Risk Factors”. No civil liability will attach to the Company in respect of this summary, including any translation thereof, unless it is misleading, inaccurate or inconsistent with the other parts of this Prospectus. Any decision to invest in the Offered Shares should be based on consideration of the Prospectus as a whole by the investor. Where a claim relating to the information contained in this Prospectus is brought before a court, a plaintiff investor might, under the applicable legislation, be required to bear the costs of translating the Prospectus before legal proceedings are initiated.

Summary of activities

Ecodis and the water disinfection market

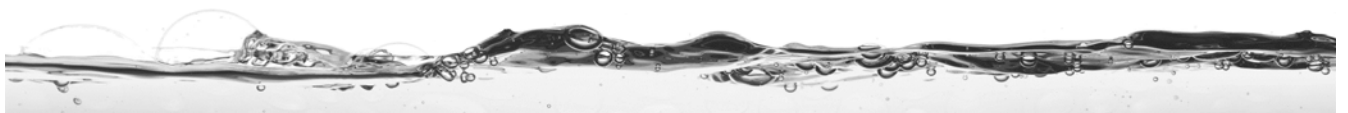
Ecodis offers an ecological alternative to existing water disinfection techniques.

Its vital and irreplaceable nature makes water extremely important economically, resulting in enormous market possibilities. In addition, the demand for safe water is increasing, by governments, the business world as well as public opinion. For the water market, particularly the niche of water disinfection, this has a major impact on its structure and scope, especially due to:

- Increasing government regulations, among others, REACH (that obliges the industry to take more responsibility for the risks of chemical substances) and the legislation that enforces measures to prevent legionella in public access places;
- Increasing awareness of responsibility by the business world, fear of damaged reputation and prospect of major cost savings;
- Increasing pressure by the public.

The main problems regarding the safe use of water do not come from the drinking-water supplied by distribution companies, but result from contamination occurring in the consumer's own network and from reuse. Biofilm in the water pipes plays a major role here as it is the ideal hiding-place and breeding ground for microorganisms.

The water disinfection market has a scope of about EUR 5.3 billion and is generally considered as a stable growth market with an expected annual growth of 10 to 15%.



The strive for safety, reliability and eco-friendliness leads to major interest in innovative decentralised technologies that also enable monitoring and adequate control. This puts traditional chemical and thermal methods under pressure for the benefit of technologies such as membrane filtration, UV-light and ozone.

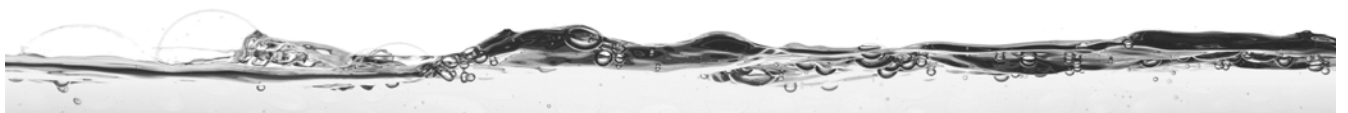
The Ecodis technology

Ecodis has developed a technology that disinfects water on the basis of the natural characteristics of the water to be treated and therefore without the addition of chemicals or salts. The technology, where free radicals are formed by anodic electrolysis, is efficient for killing a whole range of bacteria, fungi, viruses and protozoans and can be used in the fight against dangerous chemical substances in water such as cyanide, ammonium and pseudoestrogens.

The *ecodis*[®] technology, which is based on 10 years' scientific research, is capable of completely disinfecting the piping system. This is done through a unique "four steps process":

- first the *ecodis*[®] forms a barrier ("gatekeeper"): bacteria that come in via the cold water circuit are immediately killed in the electrolysis cell.
- the electrolysis cell also produces oxidants that provide residual disinfection. This eliminates bacteria that are found further on in the water flow.
- the third action of the *ecodis*[®] is the complete disinfection of biofilm. This precludes recontamination of the water by bacteria from the biofilm.
- the final step gradually physically removes the biofilm (remediation), because of which the dead biofilm cannot serve as culture medium (habitat) for new microorganisms.

The scientific knowledge Ecodis has developed over a decade in numerous areas, ranging from materials science and electronics to chemistry and microbiology and water analysis, is included in the software package linked to the cell, which was developed internally. This software ensures the optimal configuration and dimension of the *ecodis*[®] cell for new installations and the automatic steering of the disinfection process during use, for specific and changing environment conditions. Finally, the software provides major possibilities regarding supervision, alerting and reporting and analysis. Moreover, this is all done in real-time online so client interventions can be reduced to a minimum.



Competitive positioning

The *ecodis*® has a combination of characteristics because of which it can generally be considered as a very complete disinfection technology that clearly anticipates new tendencies in legislation and public opinion.

The technology combines the advantages of the various existing technologies and adds several functions:

- The *ecodis*® technology combines the disinfection capability of chemical methods, as gate-keeper as well as residual disinfection, with the eco-friendliness, sustainability and safety (in use as well as with regard to by-products) of innovative methods such as UV-light and membrane technology.
- The *ecodis*® technology is capable of physically removing the biofilm, contrary to the alternative water disinfection methods Ecodis is aware of.
- The application developed by Ecodis is fully automated and enables continuous online monitoring and registration, because of which it can offer its customers an extremely reliable solution with a low operational cost.

These characteristics enable Ecodis to offer a user-friendly and powerful solution to problems for which alternative techniques can only guarantee a suboptimal approach.

Ecodis today

Ecodis positions itself as a solutions provider for the management of the customer's water disinfection by offering a complete technological solution, including services on top of the *ecodis*® cell itself. This service model is geared to optimal long-term customer relations via a maximum comfort level and generating annual recurrent income through a fee for the technology. On a medium-long term Ecodis aims for a contractual service or operational model with payment on the basis of the amount of treated cubic metres of water for certain product groups.

Currently, Ecodis is working on the completion and standardisation of its current product group aimed at disinfecting incoming drinking-water. Ecodis positions itself in two major fields of application:

- Disinfection of sanitary water in the framework of the prevention of legionella in, among others, rest homes and hospitals, hotels, campsites, sports centres, swimming pools, staff showers, etc.
- Prevention against numerous forms of bacterial contamination that seriously affect products and/or production processes in, among others, the food industry, the pharmaceutical and chemical industry, the metal-processing industry and electronics.

Even though Ecodis, as a business with a focus on R&D, has only been on the market for a few years (from 2002) and it only recently intensified its commercial activities, it already has over 50 customer references, mainly in the field of incoming water and legionella prevention, its current focus. These references are mainly situated in the care sector (including Sint-Augustinus hospital in Antwerp), public



sector (including the Belgian Buildings Agency) and industry (including Colruyt, Danone, Panasonic, Campina, Centerparcs, etc.) in Flanders and abroad.

In the framework of legionella prevention, Ecodis was the first company in the Netherlands to obtain a provisional certification. In Belgium the certification procedure is, to the opinion of the Company, in a final phase.

The ambitions of Ecodis

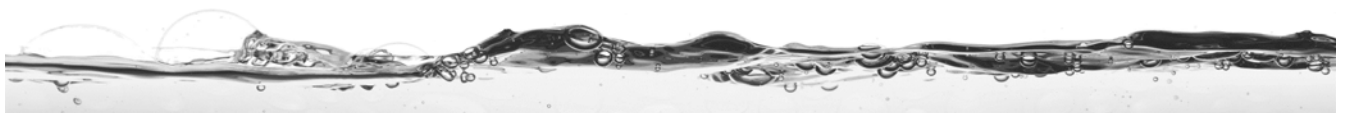
Ecodis has the ambition to become the European market leader in the field of development, production, sales and management of an eco-friendly water technology in the medium term.

Currently, Ecodis is focussing on the completion of its overall solution and the company wants to commence large-scale commercialisation. To do this, it will develop a structure that will be able to support the expected rapid growth of its activities. This structure includes setting up an internal production and sales system, which will be reinforced by partnerships if necessary. In the short-term, the geographic sales focus of Ecodis is mainly oriented towards the Benelux as a home market, and France and the United Kingdom as first export markets. In the medium-long run Ecodis is expecting a phased and planned European expansion.

Supported by its technological platform, Ecodis will also continue to invest in research and development to adapt the existing solutions for other fields of application and further improve the fundamental operation:

- Ecodis will concentrate on the following product developments:
 - Via miniaturisation, Ecodis technology could be used in soft drink dispensers, individual showerheads, in a disinfection pen for tourists, mobile homes, etc.
 - The *ecodis*[®] technology is suitable for the disinfection of small private swimming pools and whirlpools as well as larger swimming pools with a volume under 200 m³.
 - Ecodis can offer a solution for cooling systems and cooling towers, as part of legionella prevention as well as for efficiency reasons.
- Moreover, Ecodis will carry out fundamental research into the new generation of cells that will enable its use for the purification of wastewater.

Through a balanced combination of a phased commercialisation and further research and development efforts and because of its technological potential, Ecodis is confident that it will develop into a reference for water disinfection on the European market.

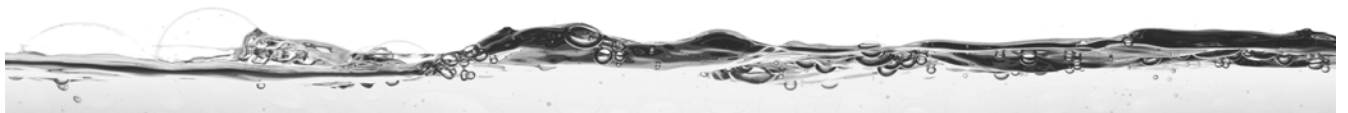


Corporate Governance

After the Offering is closed, the board of directors will consist of seven members: 1 executive director, 3 non-executive directors and 3 independent directors.

The Company's statutory auditor is VMB Bedrijfsrevisoren CVBA, having its registered office at Entrepotkaai 3, 2000 Antwerp, represented by Mr Alain Bolssens, company auditor and a member of the "Instituut der Bedrijfsrevisoren / Institut des reviseurs d'entreprises".

After the closing of the Offering the Company's board of directors will apply its corporate governance charter, which is based mainly on the recommendations of the Belgian Corporate Governance Code, which was published on 9 December 2004 by the Belgian Corporate Governance Commission. In principle the Company is not subject to the Code, which applies only to companies that are listed on a regulated market. The Company's board of directors has the intention of fulfilling the Belgian Corporate Governance Code in general. The board of directors will review the corporate governance charter from time to time and make any changes that it deems necessary and appropriate.

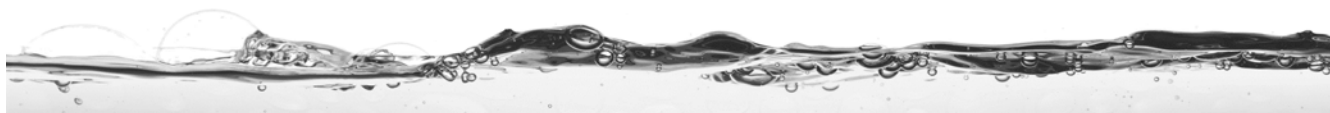


Summary of the Offering

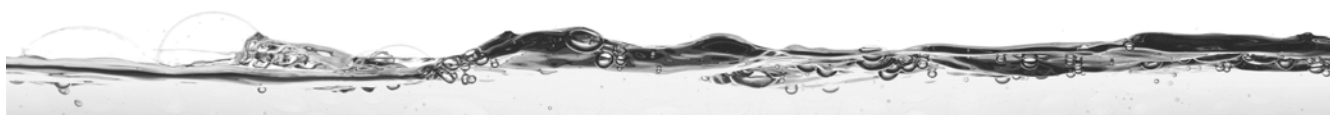
Company	The limited liability company (<i>naamloze vennootschap</i>) Ecodis, which is the issuer of the shares in the present Offering.
Offering	The Offering is being organized as a public offering in Belgium, intended primarily for retail investors, and a private placement for institutional investors in Belgium and Europe.
Offered Shares	<p>The Offering consists of a Base Offering of New Shares in an amount of up to EUR 15 million. This Base Offering may be increased, in the context of the Overallotment Option, by up to EUR 2.25 million in existing shares.</p> <p>The Offered Shares will be entitled to dividends for the financial year beginning on 1 January 2007 and subsequent financial years.</p>
New Shares	<p>The New Shares will be issued in an amount of up to EUR 15 million in accordance with the decision of the extraordinary general meeting of shareholders of 5 June 2007.</p> <p>The New Shares will enjoy the same rights as existing shares, and shall entitle their shareholders to pay investment tax at a reduced rate (VVPR). This right will be embodied in the form of one separately negotiable VVPR strip per New Share.</p>
Selling Shareholders	<p>The Selling Shareholders will offer shares exclusively in the Overallotment Option.</p> <p>Each of the existing shareholders will contribute to the Overallotment Option pro rata to their participation in the share capital.</p>
Reserved Tranche	The portion of the Offering reserved for Geert Pepping, PE Group NV, Leo Stevens & Cie BVBA, Bart Stragier and Marc Pirenne. The above-mentioned persons enjoy a priority allocation, whereby they cannot receive less than the number of shares subscribed by them.
Free Tranche	The portion of the Offering that is not placed via the Reserved Tranche, and which is open to all investors via a public offering in Belgium, and to institutional investors in Europe via a private placement.



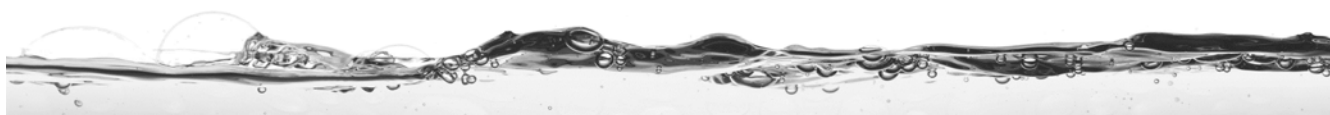
Overallotment Option	<p>The Selling Shareholders may entitle the Lead Manager to purchase Shares in the Company, in an amount equal to no more than 15% of the Base Offering, at the Subscription Price, during a period of 30 calendar days from the Listing Date, in order to cover any overallotment.</p> <p>The Overallotment Option may be exercised regardless of whether the Base Offering is fully subscribed.</p> <p>The Overallotment Shares will be existing shares and will not give entitlement to reduced-rate investment tax (VVPR).</p>
Offering Period	<p>The Offering Period begins on 6 June 2007 and is expected to close on 20 June 2007, subject to Early Closing.</p> <p>The Offering Period may be ended early by the Lead Manager, in consultation with the Company, but will in any event run for at least six stock market trading days from the making available of the Prospectus.</p> <p>Any Early Closing of the Offering Period will be announced in the Belgian financial press and on the Company's and the Lead Manager's websites.</p>
Subscription Price	<p>The Subscription Price will be a fixed and single price, which will apply to all investors, both retail and institutional investors, both in the Reserved and Free Tranche.</p> <p>This Subscription Price will be set by the Lead Manager in consultation with the Company. The Subscription Price will be published in the Belgian financial press on 6 June 2007.</p>
Allocation	<p>It is expected (but with no obligation for the Lead Manager of the Company) that at least 35% of actually allocated shares will be allocated to retail investors in Belgium, subject to a "clawback" possibility.</p> <p>If in one of the two tranches, demand significantly exceeds the number of shares offered in this tranche, the Lead Manager, in consultation with the Company, retains the right to allocate a part of the Shares in the other tranche to investors subscribing to the tranche in which demand significantly exceeds supply.</p> <p>For the allocation of the Offered Shares, the Lead Manager will make reasonable efforts to ensure that the New Shares with VVPR strips are delivered to retail investors resident in Belgium and to investors subject to Belgian tax on legal persons, in that order.</p>



Allocation Date	The Offered Shares will be allocated on the Allocation Date, that is the first stock market trading day following the closing of the Offering Period. The Allocation Date is expected to be 21 June 2007.
Payment, settlement and delivery	<p>The Subscription Price of the allocated shares must be paid in full in euros, no later than the Payment Date, that is the third stock market trading day following the Allocation Date. The Payment Date is expected to be 26 June 2007.</p> <p>The shares and VVPR strips will be delivered to investors on the fourth stock market trading day after closing of the Offering Period. This is expected to be on 26 June 2007.</p> <p>All Offered Shares and VVPR strips will be delivered solely by registration on an account at Euroclear Belgium, which is the central custodian of Belgian securities.</p>
Lock-up Period	The Company's present shareholders have concluded a lock-up agreement with the Lead Manager whereby they will not dispose of Shares of the Company for a period of 12 months from the Listing Date, subject to certain exceptions. The terms of this agreement are described in Chapter II. 4.13.2 'Lock-Up Agreements'.
Use of proceeds	The Company intends to use the net proceeds of the Offering for strategic investments, including research and development and start-up costs for the large-scale marketing of its solution, and for financing its growth, including working capital.
Costs and remuneration of intermediaries	<p>The costs of the Offering incumbent of the Company are estimated at no more than around EUR 1.2 million.</p> <p>These include the legal and administrative costs, the remuneration of the BFIC and Euronext Brussels, the costs of the mandatory announcements and of the advisers, and the Lead Manager and Underwriter's fees.</p> <p>The costs relating to the sale of the Overallotment shares, being the sale and underwriting fees, will be paid by the Selling Shareholders in respect of the Overallotment Shares offered by each of them for public purchase.</p>



Admission to Alternext Brussels	<p>An application for admission to Alternext Brussels has been submitted in respect of all the shares of the Company, together with the 873,220 shares that could be issued through the exercise of the still-outstanding warrants of Ecodis. No application will be made for the listing of the VVPR strips. The VVPR strips will be freely transferable to third parties on the public auction market of Euronext Brussels.</p> <p>The Company expects trading of the securities to begin on the first trading day following the Allocation Date, which is expected to be on or around 22 June 2007.</p> <p>From the Listing Date to the envisaged Delivery Date, the Company's shares will be listed and traded on Alternext Brussels on an “as-if-and-when-issued-and-delivered” basis.</p>
Share code:	<p>Code: ECOD ISIN: BE0003871887</p>
Timetable of the Offering	<p>The following date are the scheduled dates, subject to unforeseen circumstances or earlier/later closing:</p>
06/06/2007	Publication of the Subscription Price
06/06/2007	Start of the Offering Period
13/06/2007	First Early Closing possibility
20/06/2007	Closing of the Offering Period
21/06/2007	Allocation date
22/06/2007	Publication of the results of the Offering and allocation in the Belgian financial press
22/06/2007	Listing date
26/06/2007	Closing date (payment, settlement and delivery)



Selected Financial Information

All financial information given in this summary is based on the audited and consolidated results of the Company for the years ending on 31 December 2006 and 2005, and the Company's prospects for 2007-2012 (as set out in Chapter VI, § 6).

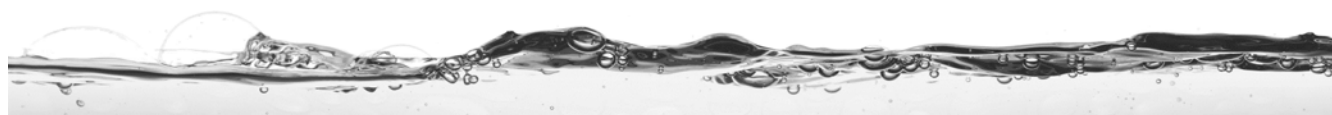
Historic balance sheet

Profit & Loss Accounts (in EUR thousands)	2005	2006
Revenues	580	401
Purchases	-268	-214
Gross Margin	312	187
Other Operational Charges	-709	-1,166
EBITDA	-396	-979
Depreciation	-84	-112
Operational Result	-480	-1,091
Financial Result	-12	-28
Loss for the Financial Year	-492	-1,119

The Company has a net cash position of EUR 1 million at the date of this Prospectus

Historic and prospective income statement

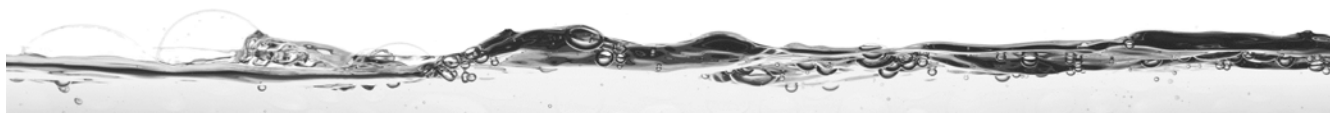
Profit & Loss Accounts (in EUR thousands)	2005	2006	2007	2008	2009	2010	2011	2012
Sales	580	401	809	3,487	8,358	20,721	36,070	62,317
Operational Charges	-976	-1,380	-4,475	-7,391	-10,384	-20,309	-30,930	-48,683
EBITDA	-396	-979	-3,666	-3,904	-2,025	411	5,140	13,634
Depreciation	-84	-112	-149	-234	-359	-484	-789	-944
EBIT	-480	-1,091	-3,815	-4,137	-2,384	-72	4,351	12,690
Investments in Fixed Assets	37	190	744	425	625	625	1,525	775
Changes in Net Working Capital	118	37	113	672	931	2,386	3,004	5,260



Risk factors

An investment in the Offered Shares involves substantial risks in relation to Ecodis NV, its activities and the Offering, as described in the section “Risk Factors” below. Before investing in the Offered Shares, prospective investors should carefully review and consider, together with the other information in this Prospectus, all factors and risks inherent in an investment in the Shares of Ecodis NV, including the following risks:

- Ecodis’s commercial strategy includes measures aimed at increasing research and development expenditure, making strategic acquisitions of products and technologies and launching new products and services. The Company expects to incur considerable costs in implementing the above-mentioned measures. The success of their execution is dependent on a large number of factors, several of which are outside the Company's control.
- Since incorporation the group’s annual financial statements have shown a negative net result, linked mainly to the research and development efforts. The business plan also foresees that the Company will make losses in the next financial years.
- The Company’s success will depend in part on the ability of the Company (and of any licensees) to keep its technology confidential vis-à-vis third parties and/or protect it with intellectual property rights, and to maintain and enforce these rights.
- Ecodis is confronted with competition of various kinds in the field of alternative water treatment. Nonetheless Ecodis insists that it has today a technological lead of at least 3 years compared to its competitors.
- The water treatment sector is characterized by continuous technological development and rapidly evolving customer needs. This means that the Company's success and continuous growth are to a certain extent dependent on its ability to follow these developments.
- Ecodis’s human capital is a key factor for the long-term sustainable development of the Company. Employee loyalty is therefore an essential element for Ecodis’s success.
- The loss of one or more key figures or a top manager could slow down the Company's growth. So far the Company is highly dependent on the continuing efforts of its management and certain key figures.
- The water treatment sector is strongly influenced by the legislation in this field, which influences the demand for Ecodis products and services.



Additional information

Capital

At the Date of this Prospectus, the share capital of the Company amounts to EUR 3,416,945.48, represented by 6,298,220 shares without nominal value, each representing an identical share of the share capital of the Company. There are still 873,220 warrants outstanding.

Articles of Association

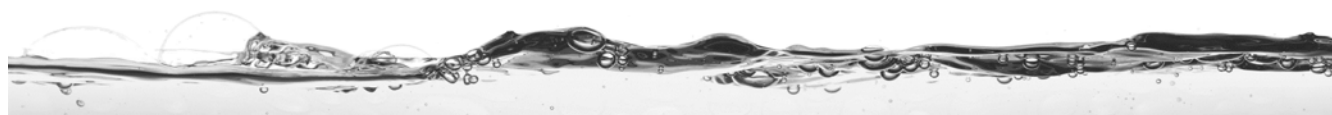
The Company's articles of association include rules governing the management of the Company, its shareholders' meeting (including rules concerning the right to attend shareholder meetings and voting rights) and the liquidation of the Company.

Publicly available information

The documents that are in the public domain according to the applicable legislation can be consulted at the Company's registered office at Brechtsebaan 30, 2900 Schoten, on telephone number +32 (0) 3 641.91.00 and/or on the Company's website www.ecodis.eu.

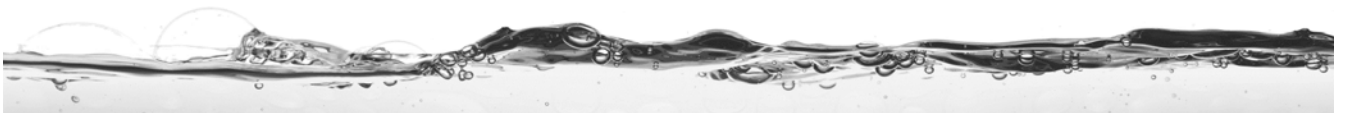
Composition of the shareholder structure before and after the Offering

SHAREHOLDER	NUMBER OF SHARES	NUMBER WARRANTS	OF PERCENTAGE (DILUTED)
Ecodis Holding NV	2,308,077	-	32.18
Anel BVBA	486,097	-	6.78
VEMA NV	446,830	-	6.23
Hervest Participations BV	707,280	-	9.86
Arcae NV	369,128	-	5.15
PE Group NV	469,115	123,220	8.26
Pieter Van Rompay	225,000	-	3.14
Geert Pepping	225,000	-	3.14
Various natural persons	846,550	-	11.81
Stichting Administratie- kantoor Ecodis	215,143	-	3.00
Warrantholders	-	750,000	10.46
Total number issued	6,298,220	873,220	



Chapter II. 6.1 mentions which parties control the above mentioned shareholders.

The expected shareholder structure following the completion of the Offering, based on a complete placement of the Base Offering and the full exercise of the Overallotment Option will be published in the Belgian financial press on 6 June 2007, together with the Subscription Price (see Chapter I.4) above.



Risk factors

An investment in the Offered Shares involves substantial risks. Before deciding to subscribe to Shares, prospective investors should carefully review and consider the following risk factors and the other information contained in this Prospectus. The occurrence of one or more of the risks described below may have a material adverse effect on the Company's cash flows, operating results, financial condition and its ability to continue as a going concern. Moreover the Company's share price could fall significantly if any of these risks were to materialize, in which case the investor could lose all or part of his investment. The investor should be aware that the risks discussed below are not the only risks to which the Company is exposed. Additional risks and uncertainties, which are not currently known to the Company or which the Company currently believes to be immaterial, could likewise impair its business operations and have a material adverse effect on the Company's cash flows, operating results, financial condition, its ability to continue as a going concern and the price of its shares. The order in which the risks are presented does not necessarily reflect the relative likelihood of their occurrence or the magnitude of their potential impact on the Company's cash flows, its operating results and financial condition, its ability to continue as a going concern and the price of its shares.

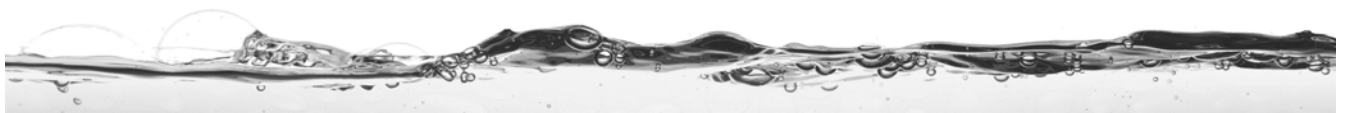
This Prospectus also contains forward-looking statements that involve risks and uncertainties. Actual results could differ substantially from those anticipated in these forward-looking statements as a result of certain factors, including the risks described below and elsewhere in this Prospectus. Investors should carefully consider whether an investment in the Offered Shares is appropriate for them in the light of the information contained in this Prospectus and their personal circumstances.

Risks related to the Company's business

Risks related to the implementation of the commercial strategy of Ecodis

Ecodis's commercial strategy includes measures aimed at increasing research and development expenditure, making strategic acquisitions of products and technologies, extending the existing products and services in Europe and launching new products and services. This strategic plan should be assessed in the light of the risks, expenditure and challenges with which a young trading company is regularly confronted. The Company expects to incur considerable costs in implementing the above-mentioned measures. The success of their execution is dependent on a large number of factors, several of which are outside the Company's control.

These include, among other things, the economic situation, the competitive environment and other conditions and uncertain factors. For this reason it is impossible to guarantee that the Company will successfully carry out its enterprise strategy. It is possible that the successful implementation of the growth policy will demand more financial resources than the Company has initially estimated. Ecodis is



unable to guarantee that it will effectively achieve the desired growth. The Company does not as yet have completely in place the structure that will be needed in order to achieve the expected turnover. No guarantee can be given that the Company will succeed in setting up this structure.

Risks related to the financial structure and profitability

Since incorporation the group's annual financial statements have shown a negative net result, linked mainly to the research and development efforts. To finance these losses the Company has undertaken various capital increases. The Company finds itself in the situation described in Article 633 of the Companies Code. The business plan also foresees that the Company will make losses in the next financial years. Although the expectation is, based on the business plan, that the net proceeds from the transaction will be sufficient to finance these further losses, this cannot be guaranteed.

Risks related to the protection of intellectual property rights

The Company's success will depend in part on the ability of the Company (and of any future licensees) to keep its technology confidential vis-à-vis third parties and/or protect it with intellectual property rights, and to maintain and enforce these rights. The Company cannot guarantee that it will be able to obtain recognition of any intellectual ownership rights and then uphold them against third party challenges to their validity, scope and/or enforceability.

A substantial portion of the Company's technology falls under the heading of factory and business secrets. The Company believes that the confidentiality of its know-how gives it a major competitive advantage. Although the Company seeks to protect these secrets to the best of its ability by, among other things, confidentiality agreements and protecting computer networks, the risk cannot be excluded that certain secrets will become known to third parties with an ensuing loss of certain competitive advantages. However, the Company estimates this risk to be low.

The Company holds two Benelux trade marks: the Benelux word and image trade mark "ECODIS, innovation in water", registration number 679298 since 26 January 2001 and the Benelux word trade mark "ECODIS", registration number 821433 since 3 April 2007 in all relevant categories. Although registered, trade marks can always be challenged by third parties.

The Company enjoys copyright protection of the programmes that have been developed by its employees and which are used for controlling its products. The Company is about to acquire the rights to the related manuals. This transfer of ownership is not, however, complete, so that no certainty exists here.

In March 2006 the Company submitted a European patent application (no. 06447032.1) with a priority claim from March 2005. The application relates to a method for removing pollutants from water-based fluids. The initial investigation by the European Patent Office dated 31 July 2006 points to the fact that the various claims of the patent application exhibit a lack of novelty in the light of six patent applications filed previously by third parties. This position was confirmed on 10 April 2007 by the European Patent



Office in the conclusions of its patent investigation. The Company has four months from this date to adapt its application in order to make good the above-mentioned lack of novelty, which it will be doing. This procedure is still running at the time of this Prospectus, and for this reason no guarantee can be given that the Company will be able to refute all the comments of the European Patent Office.

In general the enforcement of intellectual property rights is expensive, time-consuming and very uncertain. The Company is unable to guarantee that it will succeed in preventing any misuse of its intellectual ownership rights. A failure to do so could significantly affect the Company's competitiveness.

At the Date of this Prospectus the Company is not aware of any violations or misuses of its factory and business secrets or intellectual property rights.

Risks related to the competitive environment

Ecodis is confronted with competition of various kinds in the field of alternative water treatment. Nonetheless Ecodis insists that it has today a technological lead of at least 3 years on its competitors. Thanks to the rapid effect, good depositing and easy regulation of disinfection levels, the Ecodis technology offers effective disinfection at low costs compared with other technologies. This gives Ecodis a competitive advantage over companies using other technologies. Competition in the market that Ecodis serves is determined by a number of factors, and more specifically by price, technology, knowledge of application possibilities, financing possibilities, reputation, product guarantee, reliability, and the supplier's after-sales service and distribution capacity. It should be mentioned that a number of Ecodis's competitors have more extensive financial resources than Ecodis does.

There can be no certainty that the Company's competitors will not succeed in developing solutions that are cheaper or more appropriate than those of Ecodis, or that customers will not give preference to solutions, technologies or products that are offered by Ecodis's competitors.

Risk related to suppliers

Ecodis's products contain high-technology materials. Certain of these materials can be delivered only by a limited number of suppliers. This can also apply to further product developments in the future.

The Company cannot give guarantees as to whether, or under what conditions, these companies will in the future continue to work with the Company.



Risk related to customers

Ecodis has customers in both the private and the public sectors.

A portion of Ecodis's income comes from government organizations. This exposes it to various risks that are inherent in the government tendering process. These risks include, but are not limited to:

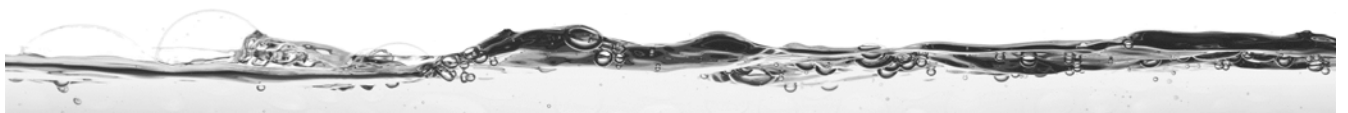
- the right to change or terminate project specifications at any time, at the government's sole decision;
- the number and conditions of new government contracts can be influenced to a significant extent by political and economic factors, such as impending elections and revisions of government fiscal policy.

The above-mentioned risks can influence the working for the government departments involved and for other departments of the same or other government organizations. Depending on the project size, the fines or negative publicity that the project can imply, these risks can have a material adverse effect on the Company's business and its operating results.

Risks related to the technology – development of a new product

The water treatment sector is very conservative. This means that the Company's success and durable growth will depend on its ability to make its products and services known to the market, and to convince the market to buy the products or to call on Ecodis's services. Ecodis will seek to do this by improving existing products or by developing new products adapted to the latest technological developments and meeting the needs of customers, or by acquiring rights to such products and by reacting appropriately to technologies and products developed by its competitors. For this reason the Company cannot guarantee that it will not be subject to the risks that always accompany the introduction of new products or technologies, such as an acceptance threshold on the market, development delays or faulty operation of the products in question.

Furthermore there is always the risk that, despite all measures taken by Ecodis, its products will fail to attain the required water disinfection levels. This can be due to a number of factors that are outside Ecodis's control. Ecodis is of the opinion that it takes the necessary measures to avoid being made legally accountable for the failure to attain the required disinfection levels. Despite this, and regardless as to whether Ecodis can be held liable in court, such situations can damage Ecodis's reputation.



Risks attached to possible acquisitions or cooperation agreements with third parties

The possibility exists that the Group will seek external growth in order to extend its offering and its customer base. Such acquisitions can directly affect Ecodis's activities, results, financial situation and equity. Takeovers and cooperation agreements represent major challenges and risks, as regards the integration of the acquired activity into the Company and the fact that no certainty exists that the Company will successfully manage the acquired companies and cooperation agreements. The related risks include the failure of the Company to achieve its objectives and expected income growth or cost savings, the failure to retain key employees of the acquired company, and those involved in taking over the obligations of the acquired company.

At the date of this Prospectus there is, however, no active acquisition policy yet in the Company.

Risks related to the human capital

Ecodis' human capital is a key factor for the long-term sustainable development of the Company. Employee loyalty is therefore an essential element for Ecodis' success.

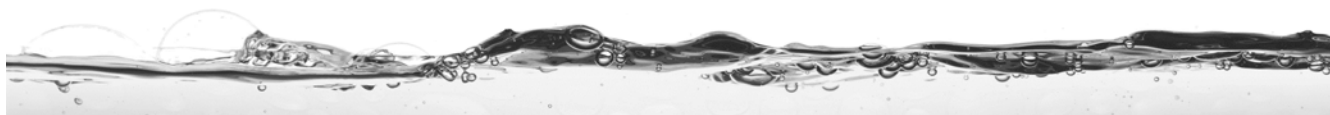
In addition to this, in order to achieve the desired growth, the Company will need to be able to attract, train, integrate and retain qualified personnel.

To reward the loyalty of its existing staff and to ensure it for the future, and also with a view to attracting and motivating new talents, Ecodis has set up a warrant plan for its employees (see Chapter III. 4.2).

Risks related to the dependence on key figures

The loss of one or more key figures or a top manager could place a brake on the Company's growth. So far the Company is highly dependent on the continuing efforts of its management and certain key figures. The loss of these persons' services might significantly limit the Company's ability to achieve its objectives. Nonetheless the Company keeps its finger closely on the pulse of the labour market so as to be rapidly able to find qualified employees in order to limit as far as possible the consequences of such a loss.

Furthermore the Company is managed by a collegiate body, the board of directors, which limits the risk of dependence on the managing director.



Risks related to changes in legislation

The water treatment sector is strongly influenced by the legislation in this field, which influences the demand for Ecodis products and services. No guarantee can be given that the applicable legislation will not in future be changed in a way that could have negative repercussions on the Company's activity and business results. In addition legislation in the countries in which the Company is, or wishes to become, active, can require specific certification for a particular application. The Company is unable to guarantee that it will be able to obtain such certification each time.

Risks related to the violation of third party intellectual property rights

The Company's success will depend in part on its ability to work without infringing or misusing third party intellectual property rights. The Company cannot guarantee that its activities will not violate third party intellectual property rights, though it considers this risk to be low.

Should the Company be required to defend itself against charges made against it, this can cost considerable time and effect and involve high court costs, regardless of whether or not the charges are founded. Nor can the Company foretell whether or not it would win such a dispute. Should the Company be found guilty of violation of third party intellectual property rights, this can result in substantial claims for damages, which could significantly influence the Company's cash flows and its financial position. The Company could in this case also be required to cease developing, using or selling the product or process in question, or to license in the disputed rights, which might not be obtainable at reasonable commercial terms, if at all.

Risks attached to the variability of revenues, operating results and profits from one quarter to the next.

Revenues, operating results and profit will vary from one quarter to the next. This can produce a relatively volatile share price. This volatility is caused, *inter alia*, by differences in the numbers of days worked as a result of public holidays and summer vacations, periodical differences between the estimated and actual extent of Ecodis' customer activities, the ability to transfer employees rapidly from completed to new projects, and changes in the pricing policy of the Company or of its competitors.

Risks related to the profitability of the business

The Company's profit margin and hence its profitability are largely dependent on the prices that Ecodis is able to charge for its products and services and the level of utilization, or ability to invoice the services of, its specialist employees. If the Company is unable to maintain the prices for its products and services



or the employment level of its specialists, Ecodis' profit margin and profitability will suffer. The prices that Ecodis is able to charge for its products and services are influenced by a number of factors, including but not limited to customers' perception of Ecodis' ability to deliver added value with its services, to competitors, to competitor price policy, and to the general economic and political environment.

Risks related to dividends

The payment of dividends in the future will depend, *inter alia*, on the profit, capital needs (including the obligatory legal reserve) and the operational and financial situation of the Company. The Company has not yet declared any dividends, nor does it expect to in the near future.

In addition, the Company's general reserve needs to be sufficiently large for it to be able to declare dividends. No certainty exists that the Company will make sufficient profit to declare dividends. If the Company does make sufficient profit, it is possible that the Company's meeting of shareholders will prefer to reinvest the profit instead of declaring dividends (see also Chapters 'Dividend Policy' and 'Taxation of Dividends').

In addition, the issuance of New Shares as part of this Offering and the listing of the same will dilute the interest of the Existing Shareholders. Further additional share issues can cause further dilution. Such dilution can influence any dividend amount per share.

Risks related to the Offering

Risks related to the listing on Alternext Brussels

Alternext is a market that was recently launched by Euronext Brussels. Right now only a limited number of companies are listed on it. The Company is unable to guarantee that a sufficient number of companies will in future be listed on Alternext Brussels in order to create adequate visibility for this market.

On top of this Alternext Brussels is not a regulated market within the meaning of Article 2.3 of the Act of 2 August 2002 regarding the supervision of the financial sector and financial services. This means that issuers of financial instruments admitted to trading on Alternext Brussels are not subject to identically the same obligations as those deriving from admission to trading on a regulated market. The reader is referred to the Alternext website (<http://www.euronext.com/fic/000/017/391/173911.pdf>), where the rules of Alternext Brussels can be consulted.



Lack of a liquid public market

Prior to the Offering no public market existed for the Shares of the Company. It is possible that no active public market for the Shares of the Company will come into being following this Offering, or that this market will not prove permanent. It is possible that the Subscription Price for the Offered Shares is no indication of the future market prices, which could fall below the Subscription Price.

The following factors can be relevant to the future market prices:

- market conditions at the time of the Offering;
- the number of shares requested, the size of the orders received and the quality of the investors;
- the future prospects of both the Company and its sector;
- the Company's sales, profit and other financial and operating information in recent periods; and
- the price/earnings ratio, the price/sales ratio, the market prices of securities and financial and operating information of companies engaged in comparable activities.

Use of proceeds

The Company's board of directors and management have considerable flexibility and broad discretion in using the net proceeds of this Offering. If the net proceeds are not wisely allocated, this could impair the Company's ability to carry out its business and may result in financial losses which may have a material adverse effect on the Shares of the Company. The Company intends to use the net proceeds of the Offering for research and development, working capital, geographical expansion, acquisitions if and when they present themselves and repayment of debt (see Chapter II.1 'Purpose of the capital increase').

The board of directors and management will determine, at their sole discretion and without prior shareholders' approval, the amounts and timing of the Company's actual expenditures. These will depend on numerous factors, including the status of acquisition opportunities if and when they present themselves, new or amended government regulations and commercial efforts, and the amount of the proceeds actually raised in the Offering. The Company is constantly evaluating opportunities to acquire business and technologies that it believes to be complementary to its business activities. The Company has not determined the amounts that it plans to spend in any of the above-mentioned areas, or the timing of these expenditures.

Future dilution

The dilution resulting from the exercise of existing warrants could adversely affect the price of the shares. See also Chapter III.4.2 'Warrant Plans'. In addition, the Company may in the future decide to raise capital through the public or private placement of (convertible) debt or equity securities, or rights to acquire these securities, and exclude or limit the preferential subscription rights pertaining to the then-



outstanding shares. If the Company raises significant amounts of capital by these or other means, this could cause dilution for existing shareholders.

Volatility of the share price

Numerous factors in addition to those described in this Prospectus may have a significant impact on the market price and volatility of the Offered Shares:

- announcement of new contracts, technological innovations, new commercial products and collaborations by Ecodis or its competitors;
- developments concerning property rights, including patents;
- regulatory developments in Europe, the United States of America and other countries;
- litigation; or
- economic, monetary and other external factors.

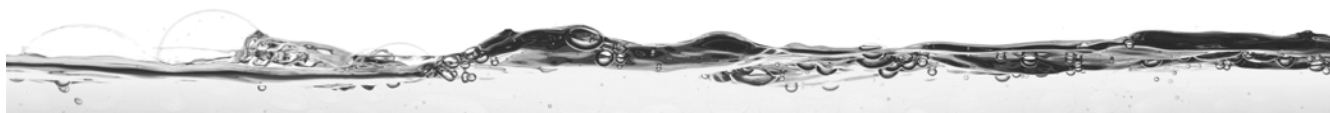
The current restrictions on transfers of shares, as described in Chapter II.4, 13.2 ‘Lock-up agreement’, are intended to prevent sudden, unorganized sales of large number of the Company's shares during a period following the Listing Date. However, no guarantee can be given that no large, unorganized transfer of shares will occur, which could have an adverse effect on the Company's share price.

Risk related to “as-if-and-when-issued-and-delivered” trading

From the Listing Date to the envisaged Closing Date, the Company's Shares will be listed and traded on Alternext Brussels on an “as-if-and-when-issued-and-delivered” basis. This means that if the Offered Shares are not issued on the envisaged Closing Date, Alternext Brussels is entitled to annul all transactions involving the Company's Shares.

Investors wishing to enter into transactions in the Company's shares prior to the Closing Date, on Alternext Brussels or elsewhere, need to be aware that the Closing may possibly not take place on 26 June 2007 or that it may not take place at all, if certain conditions and events are not satisfied, are waived or do not occur prior to the Closing Date. Such conditions include the receipt of representation by management or from the Company and of legal opinions, and such events include the suspension of trading on Alternext Brussels, or a material adverse change in the Company's financial position or business affairs or in the financial markets.

Alternext has indicated that it will annul all transactions in Company's shares if the Closing has not taken place on the envisaged Closing Date. Alternext has indicated that it cannot be held liable for any damage arising from the listing and trading on an “as-if-and-when-issued” basis as of the Listing Date until the envisaged Closing Date.



Reduced likelihood of a public bid

The Company's articles of association will include appointment rights enabling certain shareholders to appoint (one or more) directors, once they hold a specified percentage of the Company's shares (see Chapter II.1 'General Provisions').

The extraordinary shareholders meeting will also authorize the board of directors to increase the Company's share capital by up to an amount equal to the capital of the Company following the Closing, including authorizing the board of directors to do so in the event of a public takeover bid, in accordance with article 607 of the Companies Code (see Chapter III.4.4.5. 'Changes in share capital').

In this way various mechanisms exist to prevent or defend against a public takeover bid, including but not limited to the right of appointments to the board of directors, the authorization granted to the board of directors to increase the Company's capital by using the company capital (see above), and a lock-up agreement between the shareholders (see Chapter II.4.13.2 'Lock-up agreements').

Ordinary shares eligible for future sale

Selling in the public market could adversely affect the market price of the shares.

Pursuant to the lock-up provisions described in Chapter II.4.13.2 'Lock-up agreements', the Shares of the Company existing prior to the Offering may not be sold during a period of 12 months, subject to certain exceptions. After this period, the market price could be adversely affected if existing Shareholders were to sell a substantial portion of their shares on the market.



Disclaimers and notices

This Prospectus is intended to provide information to potential investors in the context of and for the sole purpose of evaluating a possible investment in the Offered Shares. It contains selected and summarized information, does not express any commitment, acknowledgement or waiver, and does not create any right, expressed or implicit, towards anyone other than a potential investor.

It may be used exclusively in connection with the Offering. The content of this Prospectus may not be construed as an interpretation of the rights and duties of Ecodis, of market practices, or of contracts entered into by Ecodis.

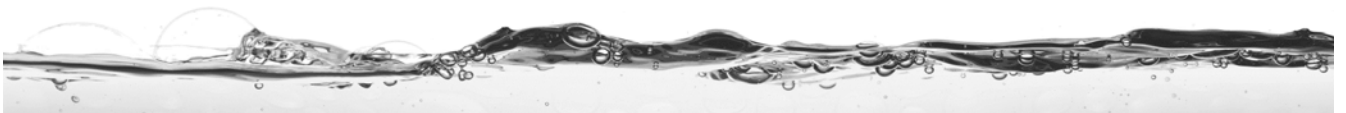
No representation

No dealer, sales person or other person has been authorized to give any information or to make any representation in connection with the Offering and the listing that is not included in this Prospectus, and if given or made, such information or representation may not be regarded as have been authorized or acknowledged by Ecodis or Bank Degroof.

Statements made in this Prospectus are valid on the Date of this Prospectus. The delivery of this Prospectus or the Closing of the Offering and listing will not imply under any circumstance that there have been no changes in the affairs or financial situation of Ecodis since the Date of this Prospectus, or that material information contained in this document is correct after the Date of this Prospectus. In accordance with Belgian law, if a significant new fact occurs between the Date of this Prospectus and the completion of the Offering that could affect investors' assessment of the Offered Shares, this new fact will need to be mentioned in an addendum to this Prospectus. The addendum shall be subject to approval by the Belgian Banking, Finance and Insurance Commission (*Commissie voor het Bank-, Financie- en Assurantiewezen / Commission Bancaire, Financière et des Assurances*) (BFIC) in the same manner as the Prospectus and shall be made public as required by the BFIC.

Decision to invest

In making an investment decision regarding the Offered Shares, potential investors must rely on their own examination of Ecodis and the terms of the Offering, including the risks and merits involved. Any summary or description set forth in this Prospectus of legal provisions, of the structure of the Company or contractual relationships is for information purposes only and should not be construed as legal or tax advice as to the interpretation or enforceability of such provisions or relationships. In case of any doubt relating to the contents or the meaning of the information contained in this document, prospective investors should consult an authorized or professional person specialized in advice on the acquisition of financial instruments. The Shares have not been recommended by any federal or state securities commission or regulatory authority in Belgium or elsewhere.



Forward-looking information

This Prospectus contains forward-looking statements and estimates made by the management of Ecodis with respect to the anticipated future performance of Ecodis and the market in which it operates. Certain of these statements and estimates can be recognized by the use of words such as “believes”, “anticipates”, “expects”, “intends”, “plans”, “seeks”, “estimates”, “may”, “will” and “continue” and similar expressions.

These cover all elements that are not historical fact. Such statements and estimates are based on various assumptions and assessments of known and unknown risks, uncertainties and other factors, which were deemed reasonable when made but may or may not prove to be correct. Actual events are difficult to predict and may depend upon factors that are beyond the Company’s control. For this reason, actual results, the financial condition, performance or achievements of Ecodis, or industry results, may turn out to be materially different from any future results, performance or achievements expressed or implied by such statements and estimates. Factors that might cause such a difference include, but are not limited to those discussed in the section ‘Risk Factors’.

Given these uncertainties, no representations are made as to the accuracy or fairness of such forward-looking statements and estimates. Furthermore, forward-looking statements and estimates are valid only as of the Date of this Prospectus.

Industry data, market share, ranking and other data

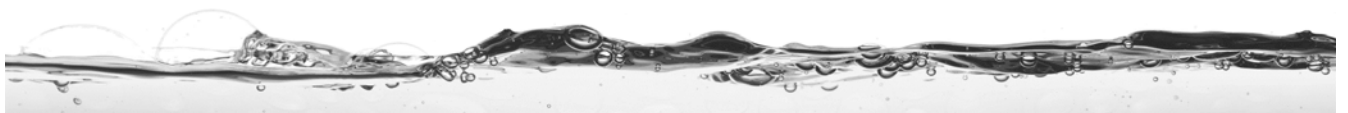
Unless indicated otherwise in this Prospectus, data on the market and industry, market share, ranking and other data contained in this Prospectus are based on independent industry publications, on reports by market research firms and on other independent sources or on the Company’s own estimates, believed by the board of directors to be reasonable. The information provided by third parties is reproduced faithfully in the Prospectus and, in so far as the Company knows or is able to establish based on the information published by the third parties in question, no data is omitted which would render the published information incorrect or misleading. Neither Ecodis, the Lead Manager nor their respective advisers have independently verified this information.

Furthermore, market information is subject to change and cannot always be verified with complete certainty due to limits on the availability and reliability of raw data, the voluntary nature of the data gathering process and other limitations and uncertainties inherent in any statistical survey of market information. As a result, prospective investors should be aware that the Company cannot guarantee that market share, ranking and other similar data in this Prospectus, and estimates and beliefs based on such data, are correct.



Rounding of financial and statistical information

Certain financial and statistical information in this Prospectus has been subject to rounding adjustments and to currency conversion adjustments. Accordingly, the sum of certain data may not be equal to the expressed total.



Chapter I: General information and information concerning responsibility for the prospectus and auditing of the accounts

1. Responsibility for the content of the Prospectus

Ecodis, having its registered office at Brechtsebaan 30, 2900 Schoten, takes responsibility for the contents of this Prospectus. The board of directors declares that it has taken all reasonable measures to guarantee the information given below and that to the best of its knowledge, the information contained in this Prospectus concords with reality, and there is no omission of any information that would make any statement herein misleading.

Ecodis Holding NV
having its registered office at
2930 Brasschaat, Leopoldslei 78
Managing Director
Represented by Elmar Peters,
Permanent Representative

Leon Van Rompay
Chairman of the Board

2. Responsibility for auditing the accounts

The Company's statutory auditor is VMB Bedrijfsrevisoren CVBA, having its registered office at Entrepotkaai 3, 2000 Antwerp, represented by Mr Alain Bolssens, company auditor and a member of the "Instituut der Bedrijfsrevisoren / Institut des reviseurs d'entreprises". The Company's auditor was appointed at the extraordinary shareholders' meeting held on 8 January 2007, for an renewable three-year term ending after the annual shareholders' meeting of 2009.

The annual financial statements for the 2004, 2005 and 2006 financial years were prepared according to prevailing Belgian standards.

The statutory auditor has also issued a statement in respect of financial years 2004, 2005 and 2006 (see chapter VII. Financial Information).

The unconsolidated financial data of Ecodis for the financial years ending on 31 December 2006, 2005 and 2004 are included in Chapter VII. 6 of this Prospectus. These financial data have been verified by the statutory auditor who has approved them, with qualifications and an explanatory paragraph. The statutory auditor's report is given in Chapter VII. 6.5.



3. *Approval of the Prospectus*

On 29 May 2007 the Banking, Finance and Insurance Commission (BFIC) approved this Prospectus pursuant to article 23 of the Belgian Act of 16 June 2006 on the Public Offering of Investment Instruments and the Admission of Investment Instruments to a Regulated Market. This approval does not imply any judgement as to the merits or the quality of the Offering, the Offered Shares or the Company.

4. *Legal publications*

All publications with regard to the Offering will be made in the Belgian financial press. These publications will mention, *inter alia*, the Subscription Price and the shareholder structure following the Offering.

5. *Available information*

5.1 Prospectus

The Prospectus is available in Dutch and English only. Investors may obtain the Prospectus free of charge at the registered office of Ecodis and the various offices of the Lead Manager.

This Prospectus is also available on the internet, on the BFIC website (www.cbfa.be), on the Company's website (www.ecodis.eu) and on the Lead Manager's website (www.degroof.be). The publication of this Prospectus on the internet does not constitute an offering or invitation to subscribe to shares made to any person in any jurisdiction where such offering or subscription is forbidden. This electronic version may not be copied, made available or printed for circulation. Other information on the website of Ecodis or on any other website does not form part of this Prospectus.

5.2 Publications with regard to the Offering

The publication of this Prospectus, the terms and conditions of the Offering and the result of the Offering including Subscription Price and allocation, will be published in the Belgian financial press.



5.3 Company documents

The Company is required to file its Articles of Association, all other documents that are to be published in the Annexes to the Belgian Official Gazette and all special reports and documents which the Company must deposit in accordance with the Belgian Companies Code, with the clerk's office of the Commercial Court of Antwerp (Belgium), where they are available to the public. A copy of the coordinated Articles of Association and all special reports and documents which the Company must deposit in accordance with the Belgian Companies Code with the clerk's office of the Commercial Court of Antwerp (Belgium) will also be available on the Company's website.

Under Belgian law, the Company must prepare annual audited consolidated financial statements. The annual statutory (unaudited) financial statements, audited consolidated financial statements and the reports of the board of directors and statutory auditor relating thereto are filed with the Belgian National Bank, where they are available to the public.

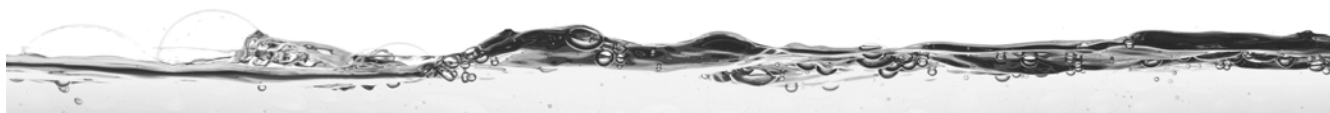
5.4 Occasional and periodical information

Furthermore, as a listed company, the Company is required to publish summaries of its annual and semi-annual financial statements as well as an annual brochure including the annual financial statements, the auditor's audit report and the report of the board of directors of the Company. These summaries are generally published in the Belgian financial press in the form of a press release. Copies thereof and the annual report are also available on the Company's website www.ecodis.eu.

The Company will also be required to disclose price sensitive information and certain other information to the public. In accordance with the Belgian Royal Decree of 31 March 2003 (as amended) relating to the obligations of issuers of financial instruments admitted to trading on a Belgian regulated market, such information and documentation will be made available through the Company's website, press release and the communication channels of Alternext Brussels.

The Company will further make sure that the information, which is required pursuant to the rules of Alternext Brussels, is available on a specific part (reserved for financial information) of its website and on the website of Alternext (www.alternext.com), and will circulate this information through press releases. This information will remain available online for three years. This information will be published at the same time it is disclosed by the Company.

The Company must inform Euronext Brussels of any changes to the number of issued securities and more in particular of security transactions which may impact the administration of the trading system, and this sufficiently in advance for Euronext Brussels to be able to prepare for the operational consequences thereof.



Chapter II: General information relating to the Offering and admission to listing on Alternext Brussels

1. Purpose of the capital increase

Ecodis is aiming to market its technology and product portfolio on a large scale, with the intention of becoming in the longer term a leading group in the European market for technology for treating drinking and process water.

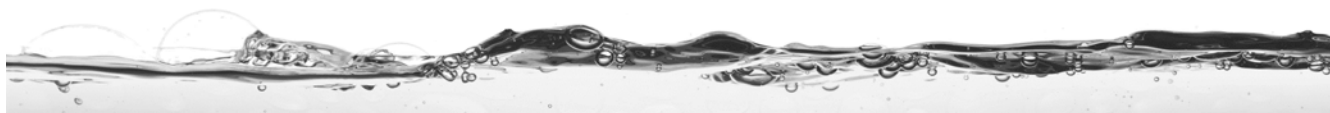
The Company has arrived at the conclusion that the Offering and the listing on Alternext can significantly support this long term strategy, as these can contribute to:

- realizing certain strategic investments (including possible acquisitions):
 - ✓ completing work on the present Ecodis total solution;
 - ✓ further research into and development of new product applications, based on Ecodis's technological platform, both upscale and downscale, and aimed at additional functionalities and new niches;
 - ✓ the setting up of production facilities for the assembly of Ecodis cells;
 - ✓ strengthening sales capacity in Benelux and gradually putting together sales networks in the United Kingdom and France;
 - ✓ strengthening the central organizational structure;
- financing of the growth strategy, including working capital;
- having Ecodis more widely known and to getting the reputation it enjoys right now in its industry known to a wider audience and also outside Belgium;
- offer Ecodis easy access to a wider labour market, making it easier to attract highly educated personnel.

2. Overview of the decisions relating to the Offering

2.1 Resolutions of the extraordinary general meeting relating to the capital increase

The extraordinary general meeting of the Company will in principle decide on 5 June 2007 to increase its capital with the waiving of the preferential subscription rights of existing shareholders and with the payment of an issue premium. The shareholders have in addition individually waived their preferential subscription rights in favour of PE Group NV, Leo Stevens & Cie BVBA, Mr Geert Pepping, Mr Bart Stragier and Mr Marc Pirenne, who have undertaken to subscribe to part of the capital increase (see Chapter II.4.1.3). These last-named persons will benefit from the Reserved Tranche.



The capital increase will take the form of a public offering, open to all investors, of newly issued shares with VVPR strip up to a value of EUR 15 million (“Base Offering”).

On top of the Base Offering an Overallotment Option will be granted to the Lead Manager. This may be exercised from the Listing Date until 30 days thereafter, in an amount of up to 15% of the Base Offering, with the sole purpose of enabling the Lead Manager to cover any overallotments. The Base shares will be new shares and will be offered with separate VVPR strips. The shares covered by the Overallotment Option will be existing shares of the Company without VVPR strip.

This Offering is subdivided into a Reserved Tranche and a Free Tranche:

- an initial tranche (Reserved Tranche) is reserved for Mr Geert Pepping, Mr Bart Stragier, Mr Marc Pirenne, Leo Stevens & Cie BVBA and PE Group NV. Mr Geert Pepping has undertaken to subscribe to 1,025,000 Base Shares at the Subscription Price. PE Group NV, Leo Stevens & Cie BVBA, Mr Bart Stragier and Mr Marc Pirenne have committed to subscribe to Base Shares up to an amount of EUR 750,000, EUR 1,125,000, EUR 38,500 and EUR 30,000 respectively. This is a tranche with a non-reducible priority allocation.
- a second tranche (Free Tranche), consisting of the portion of the Offering, taken as a whole, that is not subscribed via the Reserved Tranche, and which is open to all investors via a public offering in Belgium, and to institutional investors in Europe via a private placement. 65% of this Free Tranche is reserved for private placement with institutional investors and 35% for retail investors.

The board of directors has decided to allocate the total amount of the issue premiums resulting from the above-mentioned capital increase to the special ‘Issue premiums’ account, which offers the same guarantee to third parties as capital and which, other than its conversion into capital, is available only subject to the same requirements as amendments to the Articles of Association.



2.2 Decisions of the Company

The Company will conclude an agreement with the Lead Manager in which it commits, during a period of 12 months from the Listing Date, and other than with the prior written consent of the Lead Manager:

- (i) not to issue, sell, attempt to dispose of or acquire purchase orders for any shares, warrants or other securities, with the exception of the granting of warrants under existing warrant plans as described in the Prospectus or an issue of shares or warrants, in this case within the framework of the authorized capital, in order to permit an acquisition of shares or assets within the Company's acquisition strategy, or,
- (ii) to buy options, convertible securities or other rights to subscribe to or buy shares, or to enter into any contract (including derivative transactions) or commitment having similar effects, or
- (iii) to buy each own shares or otherwise reduce its capital.

2.3 Decisions of certain Existing Shareholders.

The Selling Shareholders herewith agree to grant the Lead Manager an Overallotment Option of up to 15% of the Base Offering – regardless of whether the Offering is fully subscribed or not – to allow the Lead Manager to cover overallotments with a view to stabilization as from the Listing Date. To this end the Selling Shareholders have concluded a stock lending agreement with the Lead Manager.

The Existing Shareholders have also decided to respect a lock-up agreement, whereby their shares will not be negotiable during a specific period.

Finally the Existing Shareholders have waived their preferential right of subscription or their right to the priority allocation of the shares (see Chapter II.2.1).

Certain existing shareholders, certain third parties and a former director have committed to subscribe to the Offering at the Subscription Price (see Chapter II.4.13.1).

For a full description of the general terms and conditions of the Offering, the reader is referred to section 4 'Terms of the Offering'.



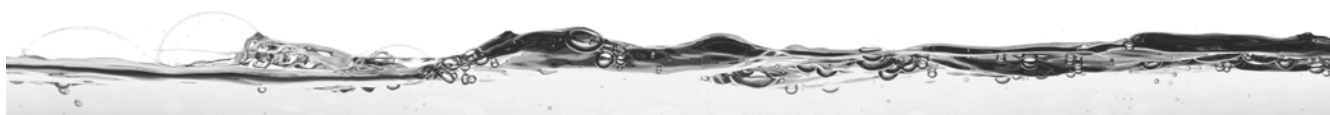
3. Important information

3.1 Overview of working capital

At the Date of this Prospectus the Company does not dispose of sufficient cash and cash equivalents to cover its need of working capital to execute its business plan, as described later in this Prospectus, during the period from the Date of this Prospectus to at least 12 months after the Listing Date. If the Offering of EUR 15 million in New Shares is fully subscribed, Ecodis will have sufficient cash and cash equivalents to cover its need of working capital to execute its business plan, as described later in this Prospectus, during the period from the Date of this Prospectus to at least 12 months after the Listing Date.

Overview working capital

Working capital in EUR thousands	31/03/2007	2006	2005
Assets	430.4	293.9	271.5
Inventories	287.8	185.5	127.9
Trade debtors < 1 year	55.5	50.0	130.8
Other receivables < 1 year	83.3	56.5	9.1
Deferred charges and accrued income	3.8	2.0	3.8
Equity and liabilities	547.8	391.3	405.8
Trade payables	292.6	152.4	277.9
Salaries and social security	97.4	112.4	77.5
Other payables < 1 year	50.2	48.7	40.8
Accrued charges and deferred income	107.6	77.8	9.6
Net working capital	-117.4	-97.4	-134.3



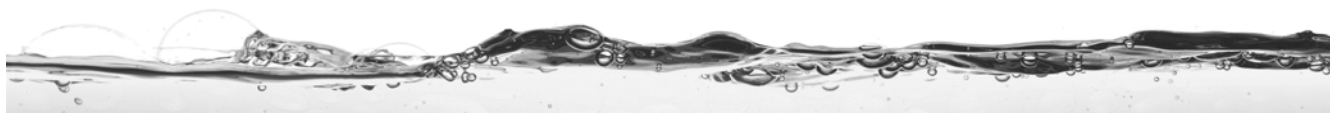
3.2 Equity and liabilities

The following table gives the Company's equity and the financial debt position at 31 December 2006. This table should be read together with the Company's audited financial statements, including the related annexes and with the chapter 'Management explanations and analysis of the financial situation and business results' (see Chapter VI).

Equity and net debt position

Capital and debt position (in EUR thousands)	31/03/2007	2006	2005
Capital	1,459.6	1,459.6	734.0
Issue premiums	566.0	566.0	566.0
Consolidated reserves	-3,019.6	-2,555.1	-1,435.8
Equity	-994.0	-529.5	-135.8
Financial debts > 1 year	1,166.8	884.3	258.9
Subordinated loans	1,000.0	750.0	125.0
Leasing debts	4.4	4.4	8.9
Credit institutions	162.4	129.9	0.0
Other loans	0.0	0.0	125.0
Financial debts < 1 year	70.0	4.1	21.4
Debts originally > 1 year	70.0	4.1	21.4
Financial debts	0.0	0.0	0.0
Marketable Securities and Cash	65.2	233.2	133.1
Net financial debt	1,171.6	655.2	147.2
Shareholders' equity + net financial debt	177.6	125.7	11.4

The EUR 1,000,000 subordinated loan will be repaid in the course of June 2007 in accordance with article 3 of the terms of the subordinated bond loan. This repayment will be done via the assets (notably EUR 1,957,385) received by Ecodis following the exercise of 1,763,220 warrants at the



end of May 2007. This repaid bond had been subscribed by ANEL BVBA, Ecodis Participaties Burgerlijke Maatschap, Hervest Participaties B.V., Arcae NV, VEMA BVBA and PE Group NV on 11 May 2006 and by Pieter Van Rompay on 29 December 2006. The interest on the bonds was 6% per annum. In addition, 665,000 warrants with an exercise price of EUR 1.01446 were issued on 11 May 2006 and 225,000 warrants with an exercise price of EUR 1.7641 were issued on 29 December 2006 in favour of the subscribers of the subordinated bond. The above-mentioned warrants were all exercised at the end of May 2007. For further information on the warrants, see Chapter III, 4.2 and 4.3.

3.3 Interests of the persons involved in the share issue

The following persons are involved in the public offering of the shares of Ecodis and their listing on Alternext Brussels:

- Bank Degroof NV and Degroof Corporate Finance NV: Bank Degroof NV and Degroof Corporate Finance NV are involved as Lead Manager and book-runner in both the preparatory and the execution phase of the transaction. For this they receive a fixed remuneration, plus variable remuneration depending on the success of the transaction.
- PE Group NV: PE Group NV is involved as Ecodis' financial adviser in both the preparatory phase and the execution phase of the transaction. For this it receives a fixed remuneration and a variable remuneration. In addition, 246,440 warrants were also granted to PE Group NV. Of these 123,220 were already exercised prior to the Offering, and 123,220 may be exercised only if the transaction proves a success. (see Chapter III, 5)
- NautaDutilh BVBA: NautaDutilh BVBA is involved as Ecodis' legal adviser in both the preparatory and execution stages of the transaction. For this it receives a fixed remuneration, plus variable remuneration depending on the success of the transaction.



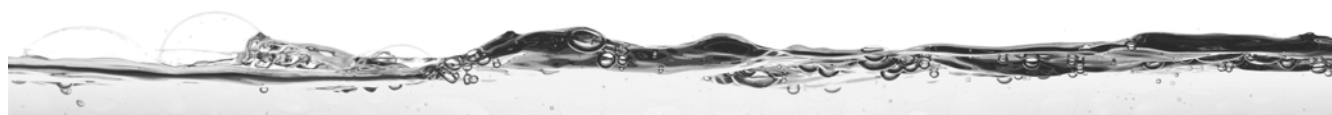
4. Terms of the Offering

4.1 Timetable of the Offering

The following table summarizes certain key dates concerning the Offering. “T” represents here the effective closing of the Offering Period, which is the earlier of the Early Closing date and the closing of the Offering Period. The figure following gives the number of banking days after the effective closing date.

Event	Expected date
Decision of the extraordinary general meeting with regard to capital increase	5 June 2007
Publication in the Belgian financial press of the terms and the Subscription Price of the Offering	6 June 2007
Start of the Offering Period	6 June 2007
First possibility of an Early Closing of the Offering (from 4 p.m.)	13 June 2007
Offering Period Closing Date (subject to Early Closing)	20 June 2007
Allocation date	T ¹ + 1
Publication of the results of the Offering and the Allocation in the Belgian financial press	T + 2
Listing date	T + 2
Start of the Stabilization Period	T + 2
Legal enactment of the capital increase	T + 4
Delivery date	T + 4
Payment date (no later than 16.00.)	T + 4
End of Stabilization Period	T + 24

¹ T is the effective closing date of the Offering Period.



4.2 Size of the Offering and nature of the Offered Shares.

The Offering consists of the Base Offering of New Shares up to an amount of EUR 15 million, possibly increased by up to EUR 2.25 million of existing shares in the framework of the Overallotment Option. There is a Reserved Tranche and a Free Tranche that is open to all investors.

The Reserved Tranche is reserved for Mr Geert Pepping, Mr Bart Stragier, Mr Marc Pirenne, Leo Stevens & Cie BVBA and PE Group NV. The number of Offered Shares to which the above-mentioned persons have subscribed is non-reducible. More specifically Mr Bart Stragier, Mr Marc Pirenne, Leo Stevens & Cie BVBA and PE Group NV will together subscribe to EUR 1,943,500 in New Shares. Mr Geert Pepping will be subscribing to 1,025,000 New Shares.

The Free Tranche consists of the portion of the Offering as a whole that is not placed via the Reserved Tranche, and which is open to all investors via a public offering in Belgium, and to institutional investors in Europe via a private placement. In the event of oversubscription the number of applications submitted for the Free Tranche may be reduced.

The New Shares are issued based on the decision of the extraordinary general meeting of 5 June 2007 to increase the capital of the Company by the issuing of the New Shares.

The capital increase will be enacted by notarial deed and the New Shares will be issued on the Closing Date.

These New Shares will be entitled to dividends from 1 January 2007 and will enjoy the same rights as the existing shares. All New Shares will be VVPR shares entitled to pay investment withholding tax at a reduced rate. This right will be represented in the form of separate VVPR strip. Each New Share will have one separately negotiable VVPR strip.

Regardless of whether or not the Offering is fully subscribed, the Lead Manager can make use of an Overallotment Option, that is exercisable from the first Listing Date until 30 calendar days thereafter, corresponding to up to 15% of the Issued Shares in the Base Offering, or up to EUR 2.25 million, with the purpose of enabling the Lead Manager to cover any overallotment and to facilitate stabilization transactions.

The Overallotment Shares, being existing shares of the Company, do not have any VVPR strips.



The Offering of the Shares consists of:

- a public offering for sale of the Offered Shares in Belgium, intended primarily for retail investors; and
- a private offering of Offered shares to institutional investors in Belgium and Europe, pursuant to article 3 §2 of the Belgian Act of 16 June 2006 on the Public Offering of Investment Instruments and the Admission of Investment Securities to trading on a Regulated Market.

On the assumption that all Offered Shares are subscribed for a total amount of EUR 15 million, the net proceeds of the Offering, after deducting costs related to the transaction, will amount up to around EUR 13.8 million.

4.3 Subscription Price

The fixed and unique Subscription Price will be determined in the week in which the Offering is opened. The Subscription Price is the same for acquiring Overallotment Shares and for subscribing to the New Shares. This applies to all, retail and institutional investors, both in the Reserved Tranche and in the Free Tranche.

This Subscription Price will be set by the Lead Manager in consultation with the Company. In setting the Subscription Price the parties will take into account, *inter alia*, the Company's valuation, the market situation, the investment climate and the result of pre-marketing to institutional investors. During the pre-marketing, the Lead Manager will be seeking to gauge institutional investors' interest in and price-sensitivity towards a specific investment.

No subscriptions will be recorded during the pre-marketing stage. The Subscription Price will be published in the Belgian financial press on 6 June 2007.

No stock exchange tax will be due on the subscription of New Shares with VVPR strips.

4.4 Offering Period

The Offering Period begins on 6 June 2007 and is expected to close on 20 June 2007, subject to Early Closing.

The Offering Period may be closed early by the Lead Manager, in consultation with the Company, as from the sixth stock market day at 16.00 after the starting date of the Offering Period (viz. 13 June 2007 – 16.00) once the total number of shares for which valid orders have been submitted is equal to or higher than the number of Offered Shares (including those in the Overallotment Option).



Any Early Closing of the Offering Period will be announced in the Belgian financial press and on the Company's and the Lead Manager's websites. The Offering Period will in any event run for at least six stock market days from the availability of the Prospectus.

Potential investors can submit their subscriptions during the entire Offering Period, unless this is closed early. The Offering Period will be the same for both institutional and retail investors.

Given the possibility of an early closing, investors are requested to submit their subscriptions as early as possible.

4.5 Application procedure

4.5.1. General

During the Offering Period investors may subscribe free of charge by submitting their subscription forms, attached to this Prospectus, to the Lead Manager.

Investors wishing to submit their subscription orders via other intermediaries than the Lead Manager, who will then pass these on to the Lead Manager, need to inform themselves of the costs that these intermediaries may charge, and which they will be required to pay themselves.

The Lead Manager will centralize all orders.

There is no minimum or maximum amount. Furthermore, orders whose size is such as to threaten the liquidity of the secondary market may be rejected in whole or in part by the Lead Manager.

To be valid, subscription forms must be submitted no later than 4 p.m. Brussels time on the last day of the Offering Period, subject to Early Closing.

Subscriptions to the Reserved Tranche and the Free Tranche follow the same procedure.

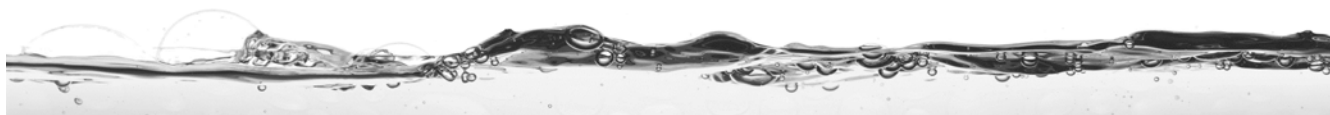
4.5.2. Retail investors

Investors should mention in their orders the number of Offered Shares that they undertake to acquire.

Only one subscription form will be accepted per investor. Where the Lead Manager establishes, or has reasons to assume, that a single investor has submitted more orders, he is entitled to disregard these investment forms. Only those registration forms as an attachment to the Prospectus will be considered.

Purchase orders must be expressed in the price of the Offering and under the terms and conditions set out in this Prospectus.

A subscription order submitted by an investor according to the above is binding for this person and may no longer be withdrawn.



Retail investors are requested to submit their subscription forms as rapidly as possible to the Lead Manager, at its counters or via other financial intermediaries. Retail investors should inform themselves of any costs charged by these other financial intermediaries.

4.5.3. Institutional investors

The Lead Manager will record the interest from institutional investors, that is, the number of shares they wish to acquire.

4.6 **Allocation of the Shares**

4.6.1. General

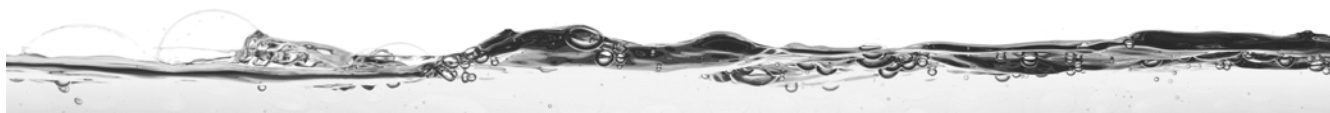
The Offering within the Free Tranche is directed at both private and institutional investors. The Lead Manager's intention is to give preference, as far as possible, to attracting stable shareholders that understand that the Company still has to undergo a significant evolution, as well as to an allocation that will help achieve a widely diversified shareholder base among the general public.

Investors must take into account the fact that in principle all shares to which they have subscribed can be allocated to them. This means that they must have sufficient funds available at the time of subscription and no later than the Payment Date.

The allocation will take place on the Allocation Date, one day after the closing of the Offering Period. The exact number of Offered Shares (including those of the Overallotment Option) to be allocated to private and institutional investors respectively, will be determined by the Lead Manager in consultation with the Company. This will depend on the respective demand from private and institutional investors and on the quantitative analysis of and, for institutional investors alone, the qualitative analysis of the order book.

It is expected (but with no obligation for the Lead Manager of the Company) that at least 35% of actually allocated shares in the Free Tranche will be allocated to retail investors, subject to a possibility of "clawback" (see paragraph 4.6.3 Clawback).

In the event of oversubscription of Offered Shares intended for retail investors, the allocation to retail investors will take place on the basis of objective allocation criteria (such as the use of a relative or absolute number of shares in respect of each subscription, that can – but without there being any requirement to do so – be grouped in specific tranches). The Lead Manager retains the right to give preferential treatment to subscriptions submitted during the first six days of the Offering Period, and this gradually in order of reception of subscriptions by the Lead Manager between the first and sixth day of the Offering Period (orders submitted on day one are better served than those submitted, for example, on day six).



Subscriptions by institutional investors may also be reduced in the event of oversubscription. This will take place on the basis of qualitative criteria such as the time of subscription and the quality of the orders.

Subscriptions to the Reserved Tranche may in no case be reduced.

No preferential treatment will be given to registration forms submitted to the Lead Manager rather than to other financial intermediaries.

For the purpose of this Offering, retail investors are defined as natural persons and legal persons subscribing to Shares in an amount of EUR 50,000 or less.

The results of the Offering and, where applicable, the distribution ratio of the Shares, will be made public in the financial press one day after the Allocation Date. Trading in the Offered Shares may not begin before the allocation of the Shares.

Given that the Offering consists mainly of New Shares, it is expected that retail investors will receive New Shares with VVPR strips. In the event of overallotment, the Overallotment Shares will be allocated to institutional investors.

4.6.2. Allocation of New Shares with VVPR strips and existing shares

For the allocation of the Offered Shares, the Lead Manager will make reasonable efforts to ensure that the New Shares with VVPR strips are delivered to retail investors resident in Belgium and to investors subject to Belgian tax on legal persons, in that order.

Apart from these reasonable efforts with respect to the allocation of VVPR strips, all investors can receive either New Shares, or existing shares, or a combination of both. Although it is expected that retail investors will receive exclusively shares with separate VVPR strips, the Selling Shareholder(s) granting the Overallotment Option, Ecodis and the Lead Manager will not be liable towards investors for the allocation of shares, with or without separate VVPR strip.

4.6.3. Clawback

If in one of the two tranches, demand significantly exceeds the number of shares offered in this tranche, the Lead Manager, in consultation with the Company, retains the right to allocate a part of the Shares from the other tranche to investors subscribing to the tranche in which demand significantly exceeds the number of Shares offered.



4.7 Payment, settlement and delivery of the shares and VVPR strips

The Subscription Price of the allocated shares must be paid in full, in euros, with all applicable taxes (see Section 7.5 Tax on Stock Market Transactions). This amount must be paid on the Payment Date, that is value the third stock market trading day following the Allocation Date of the Offered Shares. This Payment Date is currently set at no later than around 26 June 2007.

The shares and VVPR strips will be delivered to investors on the Delivery day, which will be the fourth stock market trading day after the closing of the Offering Period. Delivery Day is expected to be around 26 June 2007.

The Payment Date and the Delivery Date of the Offered Shares and the VVPR strips will be determined on the two above-mentioned dates, except for any Early Closing of the Offering.

All Offered Shares and VVPR strips will be delivered by book-entry facilities of Euroclear Belgium, which is the central custodian of Belgian securities. As mentioned in Section 4.8 'Form of the Offered Shares and VVPR', the shares and VVPR strips will available solely in book-entry form after Delivery Date.

4.8 Form of the Offered Shares and VVPR strips

All Offered Shares will be issued in the form prescribed by Belgian law. These will be ordinary shares, all of the same category, fully paid in, without mention of nominal value. They will carry the same rights as the other shares of the Company.

They will have the ISIN code BE 0003871887.

The Offered Shares and VVPR strips will be issued as bearer securities in book-entry form. They will be registered on a securities account and will no longer be physically deliverable. They will be represented by one or more global certificates deposited with Euroclear Belgium.

It is expected that the New Shares will be issued by the Company on or around 26 June 2007.

As specified in the Act of 14 December 2005 ending the system of bearer shares, the shares that on 1 January 2008 are listed on a regulated market and registered on a securities account, will be automatically converted into dematerialized securities. The automatic conversion on 1 January 2008 into dematerialized securities, as specified by the above-mentioned Act of 14 December 2005, does not apply in principal to the Shares, as Alternext Brussels is not a regulated market.

The Company's Articles of Association make provision for the automatic conversion of shares registered on a securities account on 1 January 2008. Investors do not need therefore to take any special initiative. The Company will conclude a contract for this purpose with a recognized account holder.



4.9 Dividends

4.9.1. Entitlement to dividends

The Offered Shares entitle their owners to participate in any profits from 1 January 2007 onwards, and therefore entitle them to any dividends declared in respect of the financial year closing on 31 December 2007 and of following financial years.

Shares resulting from any exercise of warrants will share in any profit as from the financial year beginning on 1 January of the year in which these Shares are issued (see Chapter III, 5).

4.9.2. Dividend policy

The Company has not to date declared or paid any dividends on its shares. Following the Offering the Company's dividend policy will be defined and possibly adapted by a decision of the Company's board of directors. Each payment of dividends will be based on the Company's profit, its financial situation, its capital needs and other factors deemed important by the board of directors. Neither Belgian legislation nor the Company's Articles of Association require the board of directors to declare dividends. The board of directors expects to retain all profits from the Company's activities for the development and growth of its activities. It therefore does not expect that dividends will be paid to shareholders in the near future.

4.10 Admission to Alternext Brussels

4.10.1. General

An application for admission to Alternext Brussels has been submitted in respect of all the shares of the Company, together with the 873,220 shares that could be issued through the exercise of the outstanding warrants of Ecodis. It has been decided that the Shares will be listed with the symbol ECOD and with ISIN code BE BE0003871887. No application will be made to list the VVPR strips. The VVPR strips will be freely transferable to third parties on the public auction market of Euronext Brussels.

The Company expects trading of the securities to begin on the first trading day following the Allocation Date, which is expected to be on or around 22 June 2007.

Prior to the Offering no public market existed for the Shares and VVPR strips issued by the Company.

4.10.2. Listing and trading on an "as-if-and-when-issued-and-delivered" basis

To the extent that the Company's shares will be listed and traded on Alternext Brussels on an "as-if-and-when-issued-or-delivered" basis from the Listing Date to the planned Delivery Date,



Alternext Brussels is entitled to annul all transactions relating to the shares if the Offered Shares are not delivered on the planned Delivery Date.

Investors wishing to effect transactions prior to the planned Delivery Date in respect of the Offered Shares, regardless of whether such transactions are undertaken on Alternext or elsewhere, need to be aware that it is possible that the Delivery Date may not take place on 26 June 2007 or not at all, in the event that certain conditions or occurrences mentioned in the *underwriting agreement* (see Chapter II, 4.11) and which could significantly jeopardize the success of the offering and/or have a material adverse effect on the Company's financial situation, are not fulfilled, take place, are not waived, or if they do not occur on or before this date. Such conditions contain a number of warranties demanded by the Underwriters on behalf of, primarily, the Company and the Selling Shareholders, and such occurrences include the suspension of trading on Alternext or a material adverse change in the financial situation or management of the Company or in the financial markets.

Alternext has indicated that it will annul all transactions relating to the Company's shares if the Offered Shares are not issued on the Delivery Date. Alternext has indicated that it cannot be held liable for any damage deriving from the listing and trading of an "as-if-and-when-issued-or-delivered" basis from the Listing Date to the planned Delivery Date.

4.10.3. The Role of the Listing Sponsor

Alternext's rules also set out the rules concerning the licensing, functioning and various obligations of the Listing Sponsor.

According to these rules, the Listing Sponsor is required to fulfil certain obligations during the introduction process and for a minimum two-year period following the introduction of the Company.

In this context it is required to act as adviser to the Company with regard to its obligations arising out of its listing on Alternext Brussels. The Listing Sponsor is also required to ensure that Ecodis fulfils the rules of Alternext Brussels, provides it with the necessary notifications in the event of non-fulfilment and is required to inform Euronext Brussels of the nature of the non-fulfilment and of the measures taken to correct this situation.

All the obligations of the Listing Sponsor can be read in the rules of Alternext Brussels (at www.alternext.com).

Bank Degroof is acting as the Company's Listing Sponsor at the time of admission. The Company has appointed Bank Degroof to fulfil this role for at least two years thereafter.



4.11 Underwriting agreement

It is planned that the Company and the Lead Manager (the latter being referred to hereafter as Underwriter) will conclude an *underwriting agreement* no later than at the time of publication of the result of the Offering (see Chapter II. 4.1). The total amount of the underwriting and placing commission will represent not more than 6 % of the amount of the capital increase.

In the *underwriting agreement* it will be specified that the Company makes certain representations and gives certain warranties and accepts to hold the Underwriter harmless for certain liabilities. Subject to the arrangements and conditions of the underwriting agreement, including, but not limited to, the delivery by the Company to the Lead Manager of *officers' certificates* or *company certificates*, *legal opinions* and the *auditor's comfort letter*, the Underwriter will globally undertake, in its own name, but for the account of the investors, to subscribe to the Offered Shares and VVPR strips which have been allocated to the subscribers, in order to transfer these shares and VVPR strips immediately to the investors in question.

The *underwriting agreement* will cover all the New Shares that have been allocated (up to EUR 15 million), increased by the Overallotment Option of up to EUR 2.25 million in existing shares as described in this Prospectus. The underwriting fee is included in the total sales commission as mentioned in section 4.14.

The *underwriting agreement* will specify that the Underwriter is entitled to withdraw from the underwriting agreement prior to the date of enactment of the capital increase if and when the following events occur:

- suspension or significant limitation of trading in the shares in general on Alternext during at least two successive days;
- the Bel20 index falls by at least 10% from its highest level since 4 June 2007;
- the gross return on 10-year government bonds (OLOs) rises, at any time, by 50 base points from its level at 4 June 2007;
- declaration of a general moratorium on commercial banking activities by the proper authorities in Brussels or London or a material interruption of commercial bank activities or of systems for the settlement-delivery or clearing of securities in Belgium;
- the breaking out or escalation of hostilities, terrorist acts or other emergency or crisis situations involving Belgium, the United Kingdom or the United States of America;
- any material change in the political, military, financial, economic, monetary or social situation or in the taxation system in Belgium or elsewhere;

in so far as these events, judged according to the Underwriter's standards of reasonability, can significantly impair the Offering or the listing of the Company's Shares.



4.12 Overallotment Option and Stabilization

4.12.1. Overallotment Option

In the context of the Offering the Lead Manager can proceed to over allot shares in order to stabilize the price of the Company's shares. In this case it may, but is not obliged to carry out stabilization transactions on the secondary market following the listing of the Company's shares. This possibility will exist regardless of whether the Base Offering is fully subscribed.

To cover a possible overallotment of Shares by the Lead Manager, certain Selling Shareholders have given the Lead Manager the right to buy, within 30 calendar days of the Listing Date, a number of shares equal to 15% of the number of Offered Shares in the Base Offering, at the Subscription Price (the "Overallotment Option") (See Chapter III.6.2).

In order to cover the Lead Manager's obligation to deliver the Overallotment Shares on the Delivery Date in the context of the agreement, it is also specified that the Lead Manager will, no later than on the Allocation Date, conclude a stock lending agreement with specified Selling Shareholders.

The Lead Manager can cover the obligation to return the lent securities either by buying Shares of the Company on the open market or by exercising the Overallotment Option.

4.12.2. Stabilization

The Lead Manager will undertake the stabilization transactions, if any. The price at which these transactions take place may not be higher than the Subscription Price. The maximum number of Shares that the Lead Manager can acquire in the context of the stabilization corresponds to the number of Shares of the Overallotment Option, in other words 15% of the total Offered Shares in the Base Offering.

Neither the Company nor the Lead Manager can give any guarantee or prediction as to the extent of the stabilization transactions or as to the consequences of the stabilization transactions or the overallotment on the share price. Such transactions will in any event end 30 calendar days after the Listing Date. It is possible that, as a result of stabilization transactions, the price during the Stabilization Period will be higher than it would have been if no stabilization had taken place.

Within a week of the end of the Stabilization Period, the following information will, in accordance with article 8, § 3 of the Royal Decree of 5 March 2006, be published on the Company's website: (i) whether or not stabilization activities have been undertaken, (ii) the date on which stabilization began, (iii) the date of which the last stabilization took place and (iv) the price range within which stabilization took place for each date on which stabilization transactions were undertaken.



4.13 Intention of key shareholders and members of the board of directors

4.13.1. Shareholders

Certain shareholders of the Company intend to subscribe to the Offering. More specifically Mr Geert Pepping and PE Group NV, together with a former Ecodis director, Mr Marc Pirenne and two investors, Bart Stragier and Leo Stevens & Cie BVBA, have committed to purchasing a portion of the Offered Shares. Mr Geert Pepping has committed to subscribing to 1,025,000 shares at the Subscription Price and PE Group NV, Leo Stevens & Cie BVBA, Mr Bart Stragier and Mr Marc Pirenne have committed to subscribing to EUR 1,943,500 of the capital, again at the Subscription Price. The above-mentioned persons have a Reserved Tranche (see Chapter II, 2.1 and 4.2). The Company has no knowledge of the intention of any other person to subscribe to more than 5% of the Offered Shares.

The existing shareholders will not be selling any shares in the Base Offering. The Selling Shareholders have concluded an Overallotment Option agreement with the Lead Manager and may sell existing shares of the Company in this context.

4.13.2. Lock-up agreements

The number of shares available for sale on the stock exchange will be limited by various limitations placed on the transfer of shares. These limitations can be summarized as follows:

- the present shareholders and the Company have concluded a lock-up agreement with the Lead Manager, under which the shareholders have agreed not to transfer, for a period of at least twelve months from the Listing Date, the Shares owned by them at the start of the Offering Period or resulting from the exercise after this date of warrants held by them at the start of the Offering Period (i.e. to sell or seek to sell or to seek for offers to purchase shares of the Company, not to grant or issue options, convertible securities or other rights to purchase shares of the Company, or to conclude any agreements or enter into any obligations having a similar effect).
- During the last six months of the above-mentioned lock-up period, the lock-up obligations do not apply for an organized sale of Shares in the Company at the initiative of a group of current shareholders of the Company having at that time a certain percentage of the shares issued by the Company (before the closing of the Offering) in their possession, and which is organized by and with the consent of the Lead Manager.

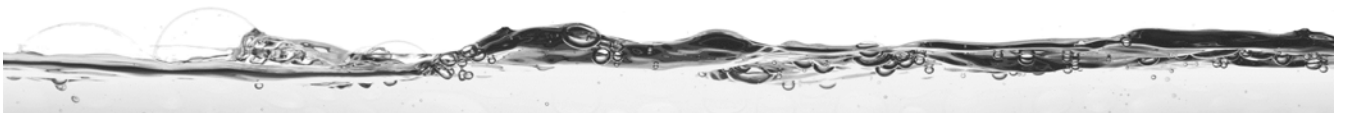
Each counterparty obtaining via this organized sale a certain percentage of the total number of the shares issued by the Company at that moment will be required to enter into a similar lock-up agreement with the Lead Manager and the Company for the remainder of the lock-up period.



The following exceptions will, however, apply to the above lock-up agreement:

- the lock-up agreements will not apply to transfers of shares in the context of the implementation of the agreements between the Selling Shareholder and the Lead Manager relating to overallotments;
- if, after the Listing Date but before the end of the lock-up period, a third party launches a public bid on all shares of the Company, the existing shareholders will be free to offer their shares in this public bid;
- any transfer between existing shareholders who are subject to the lock up agreements will not fall under the lock-up, it being understood that the acquiring shareholder will be required to respect the lock-up with respect to the acquired shares;
- any transfer of shares or rights by a shareholder to a company over which the shareholder exercises control or which exercises control over the shareholder (within the meaning of article 5 of the Belgian Companies' Code) can take place without the approval or consent of the Lead Manager, if and when the Lead Manager is informed in writing of the transfer and the acquiring company commits in writing to consider itself bound by these lock-up agreements until the end of the above-mentioned lock-up period and undertakes to transfer the previously acquired shares back to the transferor if the control relationship on the basis of which the transfer was permitted, comes to an end;
- the lock-up agreements will not apply to transfers of shares to the legal successor in rights of the holder of the shares in the event of:
 - (i) the death of the shareholder (where the holder is a natural person), or
 - (ii) the merger, liquidation or de-merger of the shareholder (where the holder is a legal person),

but on condition nonetheless that the Lead Manager is informed in writing of the same and that the legal successor adheres to the lock-up and assumes all rights and obligations under this arrangement.



4.14 Costs and remuneration of intermediaries

The costs of the Offering incumbent of the Company are estimated at no more than around EUR 1.2 million.

These include the legal and administrative costs, the remuneration of the BFIC and Euronext Brussels, the costs of the mandatory announcements and of the advisers, and the Lead Manager and Underwriter's fees.

The costs relating to the sale of the Overallotment Shares, being the sale and underwriting fees, will be paid by the Selling Shareholders in respect of the Overallotment Shares offered by each of them for sale to the public.

4.15 Financial service

Bank Degroof will provide the financial service for the Shares. The financial service includes the payment of dividends and the depositing of the Shares with a view to taking part in the general meetings of shareholders.

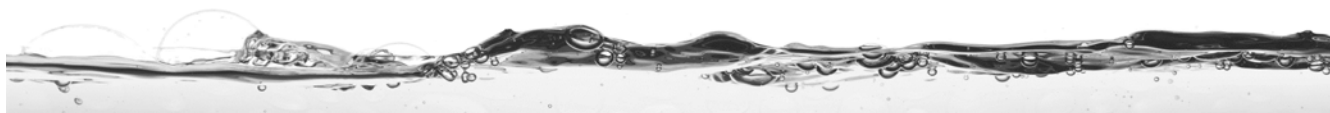
Bank Degroof will not charge the holders of the Shares for these services, but investors are free to turn to another financial institution in order, inter alia, to collect dividends or to deposit Shares in order to take part in a general meeting. Investors should inform themselves of the costs that other financial intermediaries may demand for these services.

4.16 Liquidity contract

A liquidity contract will be concluded between the Company and Bank Degroof to promote the liquidity of the share. This contract will be concluded in line with the customary standards in this matter.

4.17 Applicable legislation and competent courts

This Offering is subject to Belgian law. Solely the courts of Brussels are authorized to settle disputes relating to this Offering.



5. Valuation of the company

Based on the Company's prospects (see Chapter VI, 6.2), a pre-money valuation (i.e. not including the net proceeds of the Offering) of EUR 47 million is obtained for the equity of the Company.

5.1 Methodology

5.1.1. Selected method

Given the Company's specific profile, only the discounted cash flow method is used for valuing the Company.

Between 2007 and 2012, for which period the Company's outlook is given in Chapter VI 6.2, the Company is characterized by a very sharp revenue and profit growth.

Given that Ecodis is still in an early stage of development, application of the multiples of comparable companies is not appropriate. Listed companies in the water disinfection sector are generally more mature, so that their financial parameters differ from those of Ecodis. No comparison has been made with listed companies active in other sectors, but having similar risk profiles to that of Ecodis, as this method does not deliver any added value with respect to the discounted cash flow valuation, which takes account of the Company's specific expectations and risk profile.

5.1.2. Discounted cash flow method

The discounted cash flow method is based on the Company's business plan.

Given that the Company does not plan to finance itself with debt, the calculation is based on free available operating cash flows (without taking account of the financing structure). These cash flows are calculated as the operating result (EBIT) after taxes, plus non-cash costs (depreciation) less investments in fixed assets and net working capital.

These cash flows are discounted at the Company's weighted average cost of capital. This is defined as the average cost of debt on the one hand and on the other hand the return that equity providers require, both weighted according to their relative share in the financing of the Company.



5.2 Assumptions

5.2.1. Future cash flows

The future free operating cash flows are based on the business plan for 2007-2012 drawn up by the Company, as presented in Chapter VI, 6.2. With regard to taxes, it is assumed that the operating losses for 2007-2010 will be offset against the taxable base for the years 2011-2012.

Operating cash flows 2007-2012²

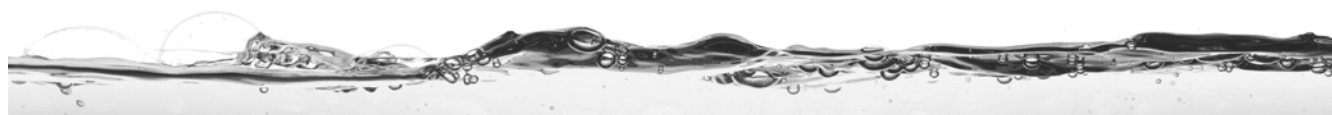
Operating Cash Flows (in EUR thousand)	2007	2008	2009	2010	2011	2012
EBIT	-3,815	-4,137	-2,384	-72	4,351	12,690
- Taxes on EBIT	0	0	0	0	0	-2,322
NOPLAT	-3,815	-4,137	-2,384	-72	4,351	10,368
+ Non-cash Costs	149	234	359	484	789	944
- Changes in Net Working Capital	-113	-672	-931	-2,386	-3,004	-5,260
- Investments	-744	-425	-625	-625	-1,525	-775
Free Operating Cash Flows	-4,522	-5,001	-3,581	-2,599	611	5,277

After this period the operating cash flows for 2013-2017 are calculated based on the following hypotheses:

- compounded average sales growth of 13.2%, with the largest growth achieved in 2013-2015;
- EBITDA margin rising to 28.4% in 2017;
- fixed asset investments evolving to long-term level of 1.5% of sales;
- net working capital remains at the same level as percentage of sales;
- a tax rate of 35% is assumed from 2013 onwards.

After 2017 the free operating cash flow is assumed to grow by 1% a year. Using the constant growth formula ($\text{Free operating cash flow}_{2018}/(\text{WACC}-g)$), the terminal value of the Company is determined at the end of 2017.

² NOPLAT = Net Operating Profit less adjusted taxes, is equal to EBIT less the taxes owed on this EBIT.
WACC = Weighted average cost of capital



5.2.2. Weighted average cost of capital

Given that the Company does not plan to finance itself with debt, the average weighted cost of capital is equal to the cost of equity.

The cost of equity is estimated at 15%, taking into account the Company's specific risk profile. The following assumptions have been made for the calculation³:

- Risk-free interest rate: 4.2%;
- Market risk premium: 5.0%;
- Company specific beta of 2.2

5.3 Recent transactions in Ecodis shares during the past 12 months

The following transactions in Ecodis shares have taken place during the past 12 months.

- Two capital increases in May 2006 at EUR 0.79 and EUR 1.01 per share respectively (see chapter III § 4.3);
- An issue of warrants in May 2006 at EUR 1.01 per Ecodis share. These warrants have already been exercised (see Chapter II, § 3.2);
- A warrant issue in December 2006 at EUR 1.01 and EUR 1.76 respectively per Ecodis share (see chapter III § 5).
- In May 2007, 225,000 existing Ecodis shares were sold at EUR 4.44 and 160,428 shares at a price representing a 15% discount to the Subscription Price (to be determined definitively on 6 June when the Subscription Price is announced in the Financial Press).⁴

5.4 Conclusion

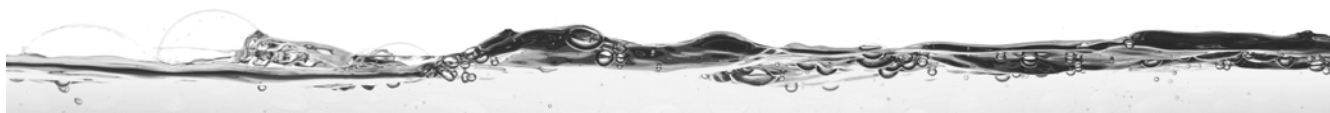
The value of the equity of the Company is defined as the sum of:

- Present value of the future cash flows between 2007 and 2017;
- The present value of the terminal value at the end of 2017;
- The net cash position of the Company.

Based on the above hypotheses the equity of the Company is valued at EUR 47 million (based on a net cash position of the Company of EUR 1 million at the time of the Offering following the exercise of warrants and repayments of the bond loan (see chapter II 3.2)).

³ Source: ESN (European Securities Network), of which Bank Degroof is a member

⁴ This means that also the number of shares sold is not yet fixed and can be fixed only when the Subscription Price has been set. On the Date of the Prospectus 385,428 shares were transferred.



This valuation is a pre-money valuation, in the sense that the value obtained is negatively affected by the discounted value of the negative free cash flows expected until 2010, and that the net cash position takes no account of the net proceeds of the Offering.

This valuation corresponds with a value per share of EUR 6.75 on a fully diluted basis⁵.

The value potential of the Ecodis technology became ever clearer with the perfecting of the application in the course of 2006 based on the satisfactory results of the pilot installations. Further capital rounds also strengthened the structure and possibilities. The renewed board of directors gradually adapted the ambitions based on the interest exhibited in new application areas and also coming from wider geographic markets. This led at the start of 2007 to the present business plan and valuation.

Through the issuing of warrants the founder wished to reward employees, consultants, directors and a number of third parties that have undertaken special services for the Company for their commitment and loyalty.

⁵ The value per share on a fully diluted basis is calculated on the basis of:

- the present valuation of the equity of the Company (EUR 47 million), plus the cash resulting from the exercise of all outstanding warrants at their respective exercise prices (EUR 1.45 million);
- the present number of shares of the Company (6,298,220) increased by the number of shares issued through the exercise of all outstanding warrants (873,220).

Further information on outstanding warrant plans can be found in Chapter III 5.



6. Information related to the Shares of the Company

6.1 Rights attached to the Shares of the Company

The New Shares will have the same rights as the existing Shares of the Company.

6.2 Legislation applicable in Belgium in case of theft or loss of securities

The theft or loss of securities is regulated by the Law of 24 July 1921, as amended by the Law of 22 July 1991, the Law of 22 March 1995 and the Royal Decree of 13 July 2001, on the involuntary dispossession of bearer securities ("*Wet op de ongewilde buitenbezitstelling van de titels aan toonder*").

This system involves the following steps:

- a protest has to be lodged with the National Securities Office ("*Nationaal Kantoor voor de Roerende Waarden/Office National des Valeurs Mobilières*");
- payments are suspended and any transfer of the protested securities becomes in principle null and void;
- barring any objection, the securities are returned to the owner as soon as they are found;
- securities listed in the Bulletin of stop orders on securities ("*Bulletin der met verzet aangetekende waarden/Bulleting des Oppositions*") for an interrupted period of four years become null and void.

The person who lodges the protest is then entitled, barring objection:

- to receive the dividend payments, interest and, if any, the principal due or any capital distribution and any liquidation balance;
- to receive, at his request and at his expense, a new security with the same number as the original security.

Objection to the protest is given by any deed or action brought to the attention of the issuing institution which shows that a third party is considered to lay claim to the existence, in its favour, of a right to the protested security. If an objection is made, the issue of the right of ownership between the person who lodged the protest and the holder of the securities is settled in accordance with common law.



7. Belgian taxation

7.1 Disclaimer

The following section summarizes the main features of the tax system applicable to Belgian residents who hold full ownership of the Shares. The summary is based on Belgian tax law (and its interpretations) in effect on the date of the Prospectus and is subject to changes in legislation that may have retroactive effect.

The public should be aware that this information is merely a summary of the applicable tax rules, which may change, and that their particular tax situation should be analysed with the own tax advisor.

This summary does neither take into account nor describe the tax law of any other country than Belgium.

Potential purchasers of and subscribers to the Shares should consult their own tax advisors regarding the Belgian and foreign tax consequences of acquisition, ownership and transfer of the Shares. This summary does not discuss the Belgian federal and regional aspects relating to inheritance and donation taxes. Moreover, this summary does not discuss tax aspects relating to potential purchasers who are subject to another tax system than the Belgian system, or which may also become applicable. It does not cover all possible categories of holders of the Shares, as some may be subject to particular rules.

7.2 Dividend and capital gain tax

7.2.1. General remarks relating to dividends

According to the applicable tax legislation, dividends paid by Belgian companies are subject to a 25% withholding tax.

For dividends paid by listed companies (i.a. Alternext, notwithstanding the fact that this market is not a regulated market in the sense of the Act of 2 August 2002 on the supervision of the financial sector and financial services), this withholding tax may be reduced from 25 to 15%, insofar the company paying the dividends did not irrevocably renounce to this reduction, and insofar during the period between the first listing on the stock market and the date of the first attribution or payment of dividends after this date the companies are established in Belgium, one or more individual persons hold the majority of the shares (even through a foundation subject to Dutch law), and the companies are not part of a group that has a coordination centre (hereafter the "SME-reduction"). On the date of the Company's first listing on Alternext, the condition relating to the SME-reduction is met, both for the Offered Shares and the Existing Shares. A reduced withholding tax of 15% is applicable to both categories of Shares.



The 25% withholding tax is also reduced to 15% , subject anti-abuse rules, for dividends on new not preferential shares offered on or after 1 January 1994 during a public call for funds and insofar the company paying the dividend did not irrevocably renounce to this reduction (hereafter "public offer reduction"). Consequently, the Offered Shares fulfil the conditions of a public offer reduction. As Ecodis did in no event irrevocably renounce to the 15% reduced dividend withholding tax, this 15% reduced dividend withholding tax can be applied to the Offered Shares. However, it may happen that on the moment of the first dividend payment after the listing of the Shares on Alternext, Ecodis does no longer fulfil the SME-reduction (as a result of a modification in the Company's shareholders' structure, if individual shareholders have less than the half of the Company's capital).

In that event, both dividends on the existing Shares and on the new Shares, which are not offered during a public call for funds, are subject to a 25% withholding tax, while dividends on the new Shares offered in the framework of this Offer, would be subject to a 15% withholding tax. However, should it appear on the moment of the dividend payment that the conditions required by the law in order to apply the 15% reduced rate are no longer fulfilled for all the Shares, Ecodis has decided to irrevocably renounce to the reduced dividend withholding tax rate and to apply the 25% standard rate to the dividend.

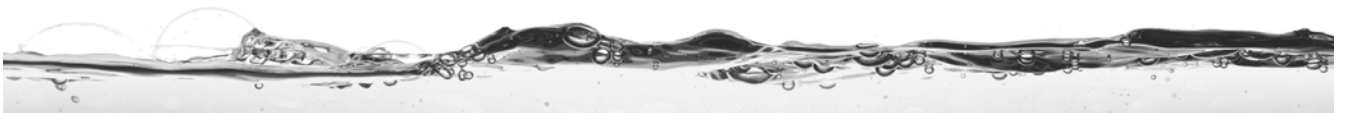
7.2.2. Private individuals who are Belgian residents

a. Dividends

Dividends paid to an individual who has not invested in the Shares for professional reasons are subject to Belgian income tax further to the following principles:

A 25 or 15% withholding tax (for the application of these rates, see section 7.2.1) is applied to the gross dividend. The dividend recipients do not have an obligation to declare these amounts in their income tax return if withholding tax was applied. However, they may declare these dividends if they wish. Declaring dividends that have been subject to withholding tax is only advantageous for a person whose taxable income is below the tax free minimum threshold. If no withholding tax was applied, the dividends must be declared in the Belgian annual income tax return.

If these dividends are declared, they are taxed at 25 or 15%, depending on the situation (see section 7.2.1). The additional local surcharges for the agglomerations and municipalities apply, which in general vary between 6 and 9% of the payable taxes.



b. Capital gains

Capital gains on operations on shares that fall within the scope of the normal administration of private estate are in principle not taxable for an individual who has not invested in the shares for professional reasons.

Capital gains on shares that are part of a substantial shareholding (more as 25% of the rights in the company and held on a certain moment, be it directly or indirectly during the past 5 years by the seller or a family member) and realised after a transfer against payment, be it directly or indirectly, within a period of twelve months to a non-resident company (established outside the EU) are in principle subject to 16,5% tax (plus the additional local surcharges for the agglomerations and communes, which in general vary between 6 and 9% of the payable taxes). In that event, the capital gains must be included in the annual income tax return.

If the capital gains result from speculation, they are taxed at a separate 33% rate (plus the additional local surcharges for the agglomerations and municipalities, which in general vary between 6 and 9% of the payable taxes).

Capital losses on shares are not tax deductible, unless they result from speculation. In that event, they are deductible from other income resulting from speculation. The capital losses resulting from speculation may be carried forward during 5 taxable periods.

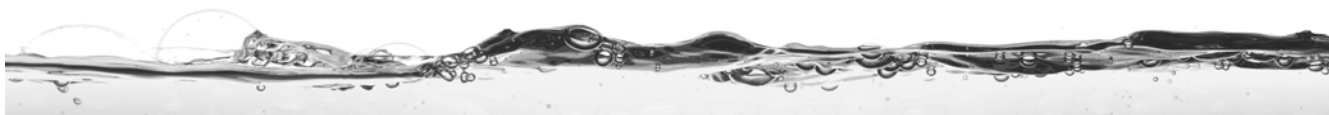
7.2.3. Belgian resident companies

a. Dividends

Dividends paid to Belgian resident companies are in principle deductible from the corporate tax base at 95% of the received amount. It is required that upon attribution or payment of the dividend, the receiving company holds a participation of at least 10% in the capital of the company granting the dividend, or that the participation has a value of at least EUR 1.200.000 (hereafter "the dividend received deduction"). The shares must qualify as a financial fixed asset and must be hold in full legal ownership during an uninterrupted period of at least one year.

If the conditions for the dividend received deduction are not fulfilled, the receiving company will pay standard corporate income tax on these dividends. In principle, a 25 or 15% dividend withholding tax applies, as the case may be (see section 7.2.1). This tax may be credited against the corporate income tax due and will be refunded if it exceeds the latter, insofar the receiving company both holds the full legal ownership of the shares on the moment of the attribution or payment of the dividend and the attribution or payment does not trigger a reduction in value or a capital loss on the shares.

Dividend payments to a qualifying EU parent company are exempt from withholding tax provided that the parent company holds a participation of at least 15% (as of 1 January 2007) in the subsidiary's capital and that it held the participation during an uninterrupted period of at least



one year. As of 1 January 2009, this percentage is brought to 10%. Should on the moment of the attribution or payment of the dividend the minimum participation threshold not be met or should the participation not be held for an uninterrupted period of one year, the EU company may however ask for the application of the exemption if it commits itself to hold the participation for at least one year after its acquisition. Shares that on the moment of the attribution or payment of the income are subject to a pledge or a loan relating to these shares, are not taken into account to compute the percentage mentioned in this paragraph.

b. Capital gain

Capital gains on the shares are in principle not subject to corporate income tax, provided that they fulfil the conditions required for the application of the dividend received deduction. However, the conditions relating to the minimum holding percentage of 10% or value of EUR 1,200,000 in full legal ownership during a period of at least one year do not apply. Capital losses on shares are in principle not deductible.

7.2.4. Legal entities

a. Dividends

In principle, the dividends are subject to a 25 or 15% withholding tax, as applicable (see section 7.2.1 of this Prospectus). Such withholding tax is the final tax.

b. Capital gains

Capital gains on shares are in principle not taxable. If the shares are however part of a substantial shareholding (see above), the capital gain is under certain conditions taxed at 16,5% (plus the additional local surcharges for the agglomerations and municipalities, which in general vary between 6 and 9% of the payable taxes and the additional crisis surcharge). Capital losses on shares are not tax deductible.



7.3 Tax reduction on the investment in the shares ('the Monory bis Law')

Payment (up to EUR 650 in 2007) for qualifying shares subscribed to by a Belgian resident who is an employee of the Company or certain qualifying subsidiaries of the Company, entitle the subscriber under certain conditions to a tax reduction in the individual income taxes. Such qualifying shares are shares subscribed to on the primary market (i.e. shares issued upon incorporation or capital increase). Existing shares do not qualify (secondary market).

Only the taxpayers who have an employment agreement with one of the above mentioned companies and receive remuneration as described in article 30,1° and 31 of the Income Tax Code do qualify. This tax reduction does not apply to directors, even if they have an employment agreement.

A company is considered a qualifying subsidiary, if the Company is deemed to control this subsidiary. Such control is deemed to exist if the Company (a) owns the majority of the voting rights; (b) has the right to appoint and to dismiss the majority of the members of the board of directors; (c) has the power to control the company based on the articles of association or an agreement; or (d) has joint control over such company.

The tax reduction is granted through the income tax return and may not combined with the reduction for pension saving schemes. The employee must prove in his income tax return that he purchased the qualifying shares and that he was still in possession of these shares at the end of the taxable period. The tax reduction is retained on the condition that the employee proves that he has kept the shares for a period of five consecutive taxable periods.

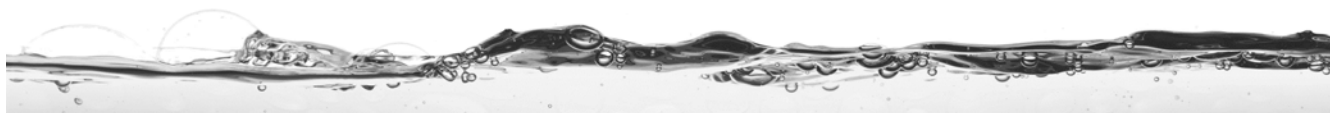
7.4 Tax on stock exchange transactions

Belgian law has a tax on stock exchange transactions and a tax on the physical delivery of bearer shares.

The application of both this tax on stock exchange transactions and the tax on the material delivery of bearer shares applicable to the Shares depends on the origin of these Shares.

The subscription, i.e. the acquisition on the primary market (the market where the shares are issued) of one or more Shares resulting from the capital increase of Ecodis, do not qualify for the tax on stock exchange transactions. Individual investors should by preference receive New Ecodis shares. The Overallotment shares are by preference granted to institutional investors.

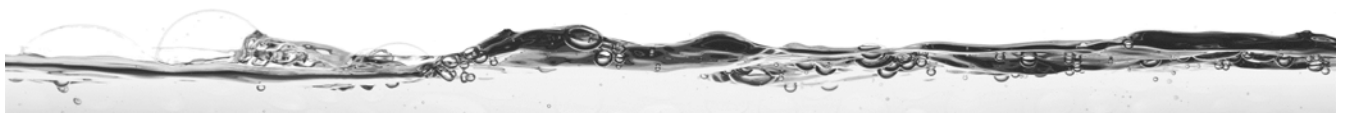
The acquisition on the secondary market of one or more Shares is subject to an 0.17% tax on stock exchange transactions (capped at EUR 500 per transaction).



7.5 Tax on the physical delivery of bearer shares

The physical delivery of any bearer share acquired on the primary market does not qualify for the tax on the physical delivery of bearer shares.

The physical delivery of any share acquired on the secondary market is subject to a tax of 0.6%.



Chapter III: General information on Ecodis and its share capital

1. General information

The Company is a public limited liability company ("*naamloze vennootschap/société anonyme*") which was incorporated on 19 July 2002 under Belgian law for an indefinite period under the name Ecodis.

The registered office of the Company is situated at Brechtsebaan 30, 2900 Schoten, Belgium (Tel: (+32)(0)3/641.91.00) and is registered in the Belgian Register of Legal Entities under company registration number 0478.049.157 (Commercial Court of Antwerp).

The financial year of the Company begins on 1 January and ends on 31 December.

The annual accounts and Articles of Association of the Company can be consulted at its registered office. The public can also obtain a copy of these documents from the registry of the Commercial Court of Antwerp (for the Articles of Association) and the National Bank of Belgium (for the annual accounts).

This section of the Prospectus summarises the object of the Company, its share capital and the rights associated with its shares. It is based on the Articles of Association of the Company, as these will be amended by the extraordinary shareholders' meeting on 5 June 2007, some amendments will come into force after the closing of the Offering. The description given here is only a summary and does not seek to be a complete overview of the Articles of Association of the Company or of the relevant stipulations of Belgian law. Neither should it be seen as a legal recommendation on these matters.

The Company has 19 employees.

2. Object of the Company

The object of the Company is described in Article 3 of the Articles of Association and is set out as follows.

The object of the Company is, in Belgium and abroad, in its own name and on behalf of third parties, on its own account and on account of third parties:

- the manufacture, assembly, handling, processing, purchase, sale, hiring and leasing of all systems related to environmental technology, including (but not limited to) water treatment systems in the broadest sense;
- the implementation of all installation activities including, inter alia (but not limited to) electrical and sanitary installation works for the commissioning of water treatment systems in the broadest sense;



- the purchase and sale of vehicles to be equipped with water treatment systems including accessories for mobile applications and, in general;
- carrying out all activities involved in service provision related to water, more specifically (but not limited to) systems for water disinfection, water purification or water treatment in the broadest sense;
- acquiring, taking over and exploiting all patents, licenses, trademarks, drawings and models which are directly or indirectly related to the object of the Company.

The Company may acquire, take over and exploit all patents, licenses, trademarks, drawings and models which are directly or indirectly related to the object of the Company.

The Company may, in Belgium and abroad, carry out all securities and real estate transactions which may directly or indirectly expand or promote its business. It may acquire all securities and real estate property even if it is not directly or indirectly related to the object of the Company. It may stand surety or give real securities in favour of companies or private individuals, in the widest sense, and also give personal or real securities, particularly in favour of groups, enterprises or companies in which the Company holds interests, in the context of its activities, as well as financing or refinancing its activities.

It may, in any way whatsoever, take up interests in all associations, firms, enterprises or companies which pursue an identical, similar or related object or which may promote its own business or facilitate the sale of its products or services, and it may collaborate or merge with them.

3. Structure of the group

Ecodis has a Dutch subsidiary: Ecodis B.V., having its registered office at Munnikenheiweg 47, 4879 NE Etten-Leur.

4. Capital and shares of the Company

4.1 Share capital and shares

On the Prospectus Date the share capital of the Company amounts to EUR 3,416,945.48. It is represented by 6,298,220 shares without nominal value. The capital is fully paid up.

4.2 Other outstanding financial securities

On 11 May 2006 the Company issued two warrant schemes. All the warrants issued have, however, already been exercised before the Offering was published, so that on the Prospectus Date there are no longer any warrants outstanding in relation to these schemes. The first warrant scheme of 11 May 2006 was intended for personnel, directors and persons providing services to the Company.



The second warrant scheme involved an issue of warrants in favour of subscribers to a subordinated bond loan.

On 29 December 2006 the Company issued three warrant schemes. The first issue comprised 750,000 warrants, which could be offered to the following beneficiaries:

- one or more physical persons who, because of their professional activity have a link with the Company or a company associated with the Company in the sense of Article 11 of the Companies Code, or
- one or more directors, any person responsible for management duties within the Company or one of its subsidiaries or any consultant working for the Company or one of its subsidiaries, appointed by the board of directors or a committee specially appointed for the purpose.

All warrants were offered and accepted by the employees, directors and a number of third parties who have provided specific services for Ecodis. The exercise price of a warrant under this scheme is EUR 1.7641.

The second scheme was issued in favour of Mr Pieter Van Rompay, in the context of his subscription of a subordinated loan. All the warrants issued in the context of this scheme have also already been exercised before the Offering was published, so that on the Prospectus Date there are no longer any warrants outstanding in relation to this scheme.

The third scheme was issued in favour of PE Group NV and/or any third party who provides services in relation to the inclusion of the shares in the Company in the listing on Euronext in the Alternext segment. 123,220 warrants issued in the context of this scheme have not yet been exercised on the Prospectus Date. The exercise price of a warrant in the context of this scheme is EUR 1.01446.

This means that the Company, on the Prospectus Date, has 6,298,220 shares and 873,220 warrants outstanding.



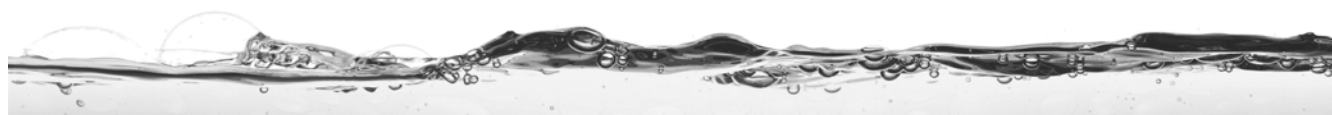
4.3 History of the capital

Date	Transaction	Number of shares issued	Issue price per share in EUR ⁶	Amount in EUR	Share capital after the transaction in EUR	Total number of shares after transaction ⁷
19/07/2002	Incorporation	2,500	100.00	250,000	250,000	2,500,000
4/02/2003	Capital increase through contribution in cash	336	0.74405	33,600 (capital) and 216,400 (issue premium)	283,600	2,836,000
24/08/2004	Capital increase through contribution in cash	504	0.86290	50,400 (capital) and 384,500 (issue premium)	334,000	3,340,000
30/06/2005	Capital increase through contribution in cash	445	0.89888	44,500	378,500	3,785,000
	Incorporation of issue premiums	-	-	355,500	734,000	
11/05/2006	Capital increase through contribution in cash	158	0.79114	30,639.36	764,639.36	3,943,000
	Incorporation of issue premiums	-	-	94,360.64	859,000	
	Capital increase through contribution in cash	592	1.101446	128,967.20	987,967.20	4,535,000
	Incorporation of issue premiums	-	-	471,593.12	1,459,560.32	
	Subdivision of shares into 100	-	-	-	-	4,535,000
	Issue of 665,000 warrants	-	1.01446	-	-	-
	Issue of 750,000 warrants	-	1.01446	-	-	-
29/12/2006	Subdivision of the shares into 10	-	-	-	-	4,535,000
	Issue of 750,000 warrants	-	1.7641	-	-	-
	Issue of 225,000 warrants	-	1.7641	-	-	-
	Issue of 246,440 warrants	-	1.01446	-	-	-
24/5/2007	Exercise of 1,763,220 warrants ⁸	1,763,220	1.01446 (264,720 warrants) 1.7641 (225,000 warrants)	1,957,385.16	3,416,945.48	6,298,220

⁶ This is the price of one share after the share split, to facilitate comparison with the Subscription price.

⁷ To facilitate better comparisons between numbers of shares, all shares are stated as numbers after the most recent subdivision of shares.

⁸ Of which 1,538,220 warrants at an issue price of EUR 1.01446 and 225,000 at an issue price of EUR 1.76441.



4.4 Description of the rights and benefits associated with the shares in the Company

4.4.1 Voting rights

Every shareholder in the Company is entitled to one vote per share, except where such voting rights are suspended in accordance with the law or the Articles of Association of the Company. The shareholders can vote by proxy.

Shares are indivisible vis-à-vis the Company. If a share belongs to different people or if the rights associated with a share are distributed between several persons, the board of directors of the Company may suspend execution of the associated rights until a single person is appointed to act as holder of the share vis-à-vis the Company.

4.4.2 Entitlement to attend and vote at the shareholders' meeting

Every year an annual shareholders' meeting is held on the first Friday of May at 11 a.m. If this day is a public holiday, the meeting will be held on the next working day.

The board of directors or the statutory auditor (or, where applicable, the liquidators) may convoke an extraordinary shareholders' meeting whenever the interests of the Company require it and must convoke an extraordinary shareholders' meeting whenever shareholders who solely or collectively represent one-fifth of the share capital of the Company, request it.

The agenda of the annual shareholders' meeting must at least include the following items: discussion of the annual report and, if applicable, the report from the statutory auditor(s), discussion and approval of the annual accounts and appropriation of the net profits, discharge granted to the directors and, if applicable, to the statutory auditor(s), and, if applicable, appointment of the director(s) and statutory auditor(s).

The annual shareholders' meeting takes place at the registered office of the Company. As an exception, this may be held at another place which must be explicitly stated in the letter of convocation.

Holders of warrants, convertible bonds and certificates which have been issued with the collaboration of the Company, are entitled to take cognizance, at the registered office of the Company, of the decisions taken by the shareholders' meeting.

Shareholders' meetings are convoked in accordance with Article 553 of the Companies Code.



(a) Convocations to the General Meeting of Shareholders

Convocations of the shareholders' meeting must disclose the agenda, setting out the items to be discussed and the proposed resolutions.

In accordance with Article 533 of the Companies Code, the convocation must be published at least 24 days before the date of registration, in the Belgian Official Gazette.

The convocation must also be published, at least 24 days before the registration date, in a national newspaper, except in the case of annual shareholders' meetings which take place in the municipality, at the venue, on the date and at the time stated in the Articles of Association of the Company, with an agenda limited to the revision of the annual accounts, the annual report from the board of directors, the report from the statutory auditor and voting on granting discharge to the directors and statutory auditor. The annual accounts, the annual report from the board of directors and the statutory auditor's report must be made available to the public 15 days before the annual shareholders' meeting.

Holders of registered shares, registered bonds or registered warrants, holders of registered certificates that have been issued with the collaboration of the Company, the directors and the statutory auditor of the Company must be notified of these convocations 15 days before the shareholders' meeting. Such notification shall take place by ordinary mail, unless the addressees have agreed individually, expressly and in writing to receive the convocation by another means of communication, whereby no proof has to be furnished that this formality has been fulfilled.

A copy of the documents which, pursuant to Article 535 of the Companies Code, have to be made available to the shareholders, will be sent out together with the convocation to holders of registered shares, registered bonds or registered warrants, holders of registered certificates that have been issued with the collaboration of the Company, and the directors and statutory auditor of the Company.

If all shares, bonds, warrants or certificates that have been issued with the collaboration of the Company are registered, notification of the convocations by means of a registered letter may be sufficient, unless the addressees have agreed individually, expressly and in writing to receive the convocation by another means of communication.

(b) Formalities for attendance at the shareholders' meeting

If the board of directors requires it in the convocation, the holders of registered shares must, to be admitted to the shareholders' meeting of the Company, notify the board of directors in writing at least three working days before the shareholders' meeting of their intention to attend the shareholders' meeting.

If the board of directors requires it in the convocation, the holders of bearer shares must, at least three working days before the shareholders' meeting, deposit their shares at the place stated in the convocation.



If the board of directors requires it in the convocation, the holders of dematerialised shares must, at least three working days before the shareholders' meeting, submit a certificate of unavailability drawn up by the approved account holder or by the liquidating institution, to the venue stated in the convocation.

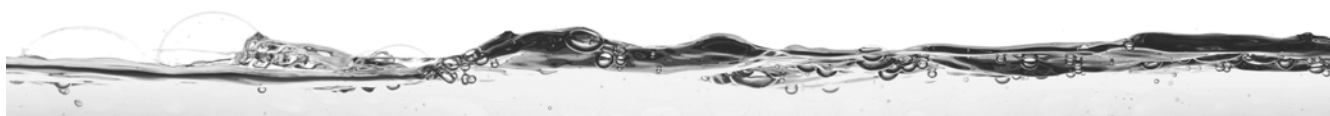
In accordance with Article 536 of the Companies Code, the convocation may include a registration date. If this is the case, the shareholders will only be entitled to attend the shareholders' meeting and exercise their voting rights for the shares which they hold on the registration date at 24.00. The aforementioned shall apply regardless of the number of shares owned by each of the shareholders on the date when the shareholders' meeting is held. This registration date cannot be set to earlier than the fifteenth working day and not later than the fifth working day before the shareholders' meeting.

(c) Representation

Any shareholder may, by letter, fax, electronic mail or by any other written method, give power of attorney to represent him at the shareholders' meeting. The proxy holder does not have to be a shareholder.

The power of attorney must at least state, on penalty of nullity, the agenda, listing the items to be discussed and the proposed resolutions, the request for instructions to exercise the voting entitlement in relation to the various items on the agenda and a notification of how the proxy will exercise his voting entitlement in the absence of instructions from the shareholder.

The board of directors may demand that powers of attorney should be submitted within the period and at the place stated therein.



(d) Quorum and majorities

There is no quorum requirement for the shareholders' meeting, unless the law stipulates one for the resolutions passed on specific subjects.

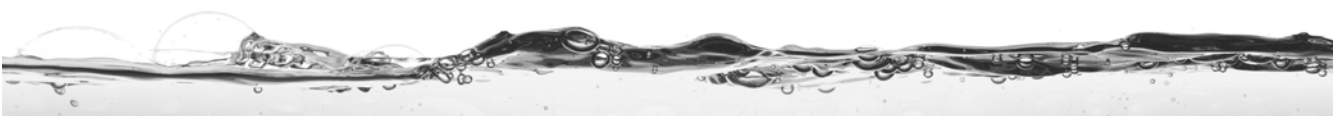
The shareholders' meeting cannot pass any resolutions on items which are not stated in the agenda, unless all shareholders attend the shareholders' meeting in person and unanimously resolve to deliberate on the said subjects.

Insofar as the distribution of information is not such that it might severely damage the Company, the shareholders or the employees of the Company, the directors shall answer the questions from the shareholders in connection with the annual report from the board of directors or the items on the agenda. The statutory auditor(s) shall answer the questions which are asked by the shareholders in connection with the statutory auditor's report.

Resolutions shall be passed by a simple majority, except where the law or the Articles of Association of the Company stipulate special majorities. The cases for which a specific quorum and special majority requirements are provided include, inter alia, making amendments to the Articles of Association, including alteration of the entitlements associated with the shares, and also the issue of new shares, convertible bonds or warrants and resolutions concerning mergers and splits, for which it is required that at least 50% of the capital should be present or represented, and that the resolution should be passed by at least 75% of the votes cast. A change in the object of the Company requires at least 50% of the share capital and 50% of the profit-sharing certificates (if such securities exist) should be present or represented and that the resolution should be passed by at least 80% of the votes cast. If the quorum requirement is not satisfied, a second meeting may be convoked, for which no quorum shall apply. The special majority requirements shall, however, remain applicable.

A person can only be admitted to the shareholders' meeting and exercise voting rights in relation to the entitlements associated with his shares if he is entered in the shareholders' register as holder of registered shares, or if, as a holder of bearer securities, he has filed these at least five days before the shareholders' meeting.

Every share confers an entitlement to one vote, subject to the relevant restrictions imposed by law.



4.4.3 Dividends

All shares shall receive an equal share of the profits of the Company (if realised). The Offered Shares shall share in the profits of the Company (if realised) in relation to the current financial year that begins on 1 January, and each subsequent financial year.

No dividends have been paid out by the Company to date.

In accordance with Article 516 of the Companies Code and the Articles of Association of the Company, the Company must appropriate at least 5% of the annual net profits of the legal unconsolidated annual accounts to the legal reserve until the reserve amounts to 10% of the share capital of the Company.

On a proposal from the board of directors, the balance of the annual net profits shall be presented to the shareholders' meeting, which is solely authorized, by a simple majority vote, to decide on its appropriation, within the limitations of Articles 617 to 619 inclusive of the Companies Code.

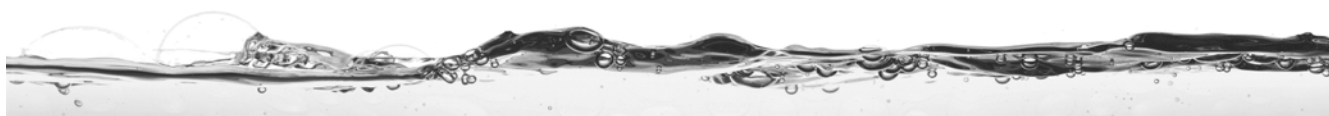
No dividend can be paid out if the net assets, as determined in the annual accounts upon closure of the last financial year, as a result of such a distribution, is or would be lower than the amount of the fully paid up capital or, if this amount is greater, the subscribed capital plus all reserves that must not be distributed in accordance with the law or the Articles of Association of the Company.

The board of directors may, in accordance with the stipulations of the Companies Code, pay out an advance which must be deducted from the dividend which is paid out on the profits for the financial year: it shall determine the amount of such advances and the date of payment.

Dividends shall be paid out on the date and at the place stipulated by the board of directors.

Under Belgian law, the entitlement to collect dividends paid out on registered shares lapses five years after the payment date, after which the Company is no longer obliged to pay out such dividends.

In accordance with Article 2277 of the Belgian Civil Code, the obligation to pay out dividends shall expire after five years, solely for registered shares. As a general rule, the obligation to pay out dividends on bearer shares cannot lapse. In accordance with the Act of 24 July 1921, as amended by the Act of 22 July 1991, the Company is entitled to pay these dividends to the "*Deposito- en Consignatiekas/Caisse de depot et consignations*". Any dividend which is paid to the "*Deposito- en Consignatiekas/Caisse de depot et consignations*" and has not been claimed within 30 years shall become the property of the Belgian State.



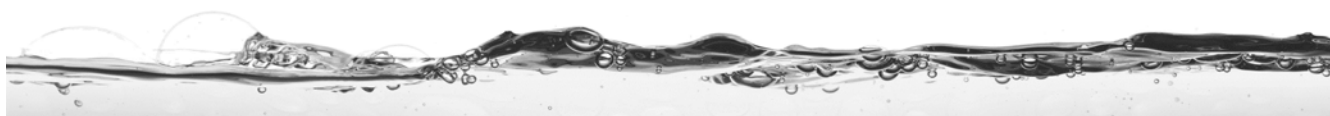
4.4.4 Entitlements in relation to dissolution and liquidation

If, as a result of losses suffered, the net assets of the Company have fallen to less than 50% of the share capital, the directors must present the question of dissolution of the Company and any other applicable measures to the shareholders' meeting. In accordance with Article 633 of the Companies Code, the shareholders' meeting may deliberate on these subjects g. The board of directors shall account for its motions in a special report to the shareholders' meeting. If the board of directors proposes to continue the activity of the Company, the board of directors shall provide an explanation in the report of the measures which the board of directors is considering in order to restore the financial situation of the Company. The shareholders' meeting must, within two months after the loss has been established or should have been established in accordance with the provisions of the law or Articles of Association, meet to deliberate on the dissolution of the Company and, if applicable, on other measures announced in the agenda.

If the net assets of the Company, as a result of the loss suffered, have fallen to less than 25% of the share capital, a resolution to dissolve may be passed by one-quarter of the votes cast at the shareholders' meeting.

In accordance with Article 634 of the Companies Code, any interested party may claim dissolution of the Company in court, if the net assets of the Company have fallen below the legal minimum. In such a case the court may grant the Company a period of time to put its situation in order.

In the event of dissolution of the Company, for any reason or at any time, the liquidation shall be carried out by one or more liquidators appointed by the shareholders' meeting, and in the absence of such an appointment, the liquidation shall be carried out by the board of directors, acting in the capacity of a liquidators committee. Their appointment must be confirmed by the Commercial Court as stipulated in Article 184 of the Companies Code. After repaying all debts, charges and costs of the liquidation, the net assets shall first be used to pay, either in cash or in kind, the amount that has been paid up in full on the shares and has not yet been repaid. Any surplus will be distributed in equal parts to all the shareholders. If the net proceeds are not sufficient to reimburse all the shares, the liquidators shall, as a priority, reimburse the shares which have been paid up to a greater extent so that they are on an equal footing with the shares which have been paid up to a lesser extent, or they shall submit a request to the latter to make additional payments.



4.4.5 Change in the share capital

(a) Change in the share capital due to a resolution by the shareholders

In accordance with Article 558 of the Companies Code, the Company may increase or reduce its share capital by a resolution of the shareholders' meeting of the Company, taken with a majority of at least 75% of the votes cast, at a meeting where at least 50% of the share capital of the Company is present or represented.

(b) Authorized capital

The board of directors is authorized, for a maximum period of 5 years counting from the publication in the Annexes to the Belgian Official Gazette of the resolution by the shareholders' meeting on 5 June 2007 to increase the subscribed capital in one or more instalments by a maximum amount equalling the Company's capital after the enactment of the capital increase resulting from the Offering. This authority of the board of directors can be renewed.

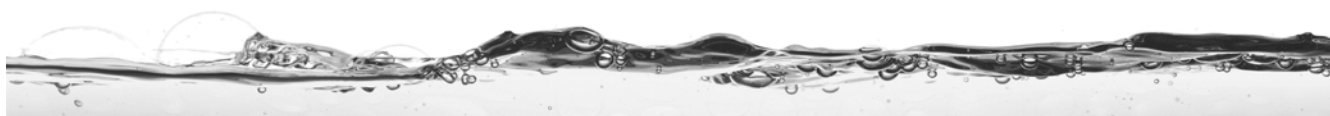
The board of directors is also authorized by the shareholders' meeting, on the basis of a resolution passed in accordance with the stipulations of Article 560 of the Companies Code, to the extent permitted by the Companies Code, in the context of the issue of shares within the authorized capital, to alter the respective entitlements of the existing classes of shares or securities which either do or do not represent the capital.

The board of directors is authorized, in the interests of the Company and subject to compliance with the conditions stipulated in Articles 595 ff. of the Companies Code, to limit or suspend the preferential subscription right assigned to the shareholders by law, even in favour of one or more specific individuals other than members of personnel of the Company or of its subsidiaries.

On the occasion of an increase in the subscribed capital, within the limitations of the authorized capital, the board of directors is authorized to request an issue premium. If the board of directors passes a resolution to that effect, this issue premium must be transferred to an unavailable reserve account which can only be reduced or written off by a resolution of the shareholders' meeting taken in the way required for an amendment of the Articles of Association.

The authority of the board of directors to increase the subscribed capital cannot be used if the capital increase is mainly brought about by a contribution in kind carried out by a shareholder who holds at least 10% of the voting rights.

The shareholders' meeting of 5 June 2007 shall expressly authorize the board of directors to increase the subscribed capital in one or more instalments, from the date when the Company receives notification from the Banking, Finance and Insurance Commission (BFIC) to the effect that it has been notified of a public bid to acquire the securities of the Company by a contribution in cash, with suspension or limitation of the preferential subscription right of the existing shareholders or by a



contribution in kind in accordance with Article 607 of the Companies Code. This authorization is granted for a period of three years from 5 June 2007, and it may be renewed.

4.4.6 Preferential subscription right

Articles 592 and 593 of the Companies Code and the Articles of Association of the Company grant a preferential subscription right to the shareholders to subscribe, pro rata, to shares which are subscribed in cash, to convertible bonds or warrants. This preferential subscription right is negotiable during the whole subscription period, within the limitations of the negotiability of securities to which they are subject. It can be exercised during a period stipulated by the shareholders' meeting, with a legal minimum of 15 days.

In accordance with Article 596 ff of the Companies Code, the shareholders' meeting may limit or suspend the preferential subscription right, in accordance with the quorum and majority requirements stipulated for an amendment of the Articles of Association and subject to compliance with special reporting requirements. The shareholders have empowered the board of directors to limit or suspend the preferential subscription right when issuing securities within the authorized capital of the Company (see Chapter III, Section 4.4.5. (b) 'Authorized capital').

4.5 **Form and transferability of the Shares in the Company**

The shares shall, within the limits prescribed by law, be registered, bearer or dematerialised shares.

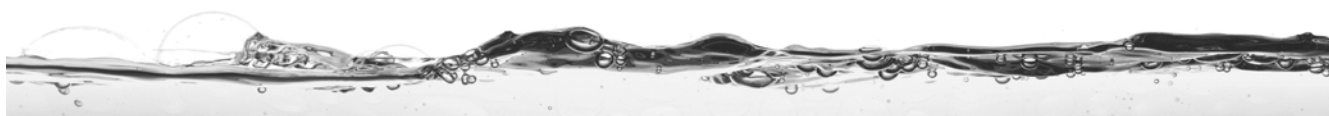
Shares which have not been fully paid up shall be registered. Ownership of registered shares shall be solely evidenced by an entry in the shareholders' register. A register shall also be kept for any profit-sharing certificates, warrants and bonds.

On 1 January 2008, all bearer shares in the Company shall be converted ipso jure into dematerialised form. The dematerialised share shall be represented in book-entry form in the name of the owner or holder, with an approved account holder or with a liquidation institution.

The Company may issue dematerialised shares either by increase in capital or by conversion of existing registered shares into dematerialised shares. Every shareholder may, at any time, and at his own expense, ask the board of directors in writing to convert his shares into registered shares or into dematerialised shares.

The Offered Shares shall take the form of bearer shares.

In accordance with the Articles of Association of the Company, the shares shall be freely transferable.



4.6 Purchase and sale of own shares

The board of directors is authorized by the shareholders' meeting to acquire the maximum number of its own shares and profit-sharing certificates as stated in Articles 620, §1 and 622, §2 of the Companies Code, and to alienate them, by purchase or exchange, directly or by a person acting on his own name but on account of the Company, or by a subsidiary as stipulated in Article 627 of the Companies Code, for a price that must amount to a minimum of one eurocent and a maximum of EUR 50.00. This authorization shall be valid for a period of 18 months counting from publication of the resolution taken on 5 June 2007 in the Annexes to the Belgian Official Gazette. This authorization may be renewed.

The shareholders' meeting has expressly authorized the board of directors, in accordance with Article 630, §1 of the Companies Code, to, directly or indirectly, by a subsidiary or by a person acting on his own name but on account of the Company or one of its subsidiaries, to receive a pledge on its own securities.

The board of directors of the Company is expressly authorized, for a period of three years counting from the publication in the Annexes to the Belgian Official Gazette of the resolution taken by the shareholders' meeting on 5 June 2007, in accordance with the relevant stipulations of the Companies Code, to acquire its own shares or profit-sharing certificates, or to alienate these, if such acquisition or alienation is necessary in order to avoid the threat of serious disadvantage to the Company. This authorization is also applicable to the purchase or alienation of shares or profit-sharing certificates which are directly controlled in the sense of Article 627 of the Companies Code.



5. Warrant Schemes

The table below only provides an overview of the warrant schemes in the context of which outstanding warrants in the Company still exist. Warrant schemes for which all warrants have already been exercised are not shown in it, but these can be found in the table showing the history of the capital (see Chapter III, 4.3. 'History of the capital').

Warrant Scheme	Date of issue	Number of warrants issued	Number of warrants offered and accepted	Number of warrants outstanding	Exercise price in EUR	Exercise period
Warrant scheme 1	29/12/2006	750,000	750,000	750,000	1.7641	2 years
Warrant scheme 2	29/12/2006	246,440	246,440	123,220	1.01446	5 years
Total		996,440		873,220		

Every warrant confers an entitlement to one share in the Company.

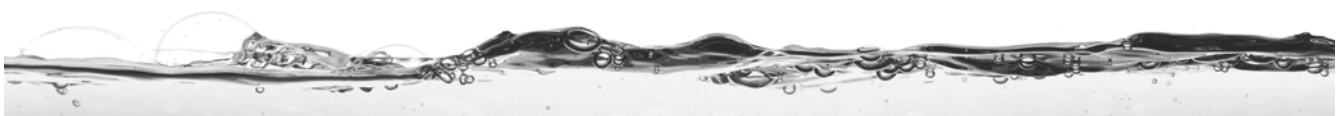
Warrant scheme 1 is a scheme issued in favour of:

- one or more physical persons who, because of their professional activity have a link with the Company or a company associated with the Company in the sense of Article 11 of the Companies Code, or
- one or more directors, any person responsible for management duties within the Company or one of its subsidiaries or any consultant appointed by the board of directors or by a committee specially appointed for the purpose to work for the Company or one of its subsidiaries.

The exercise price of the warrants is determined by the board of directors or by a specially appointed committee at the time of the offering. On 11 January 2007, all warrants were offered at an exercise price of EUR 1.7641.

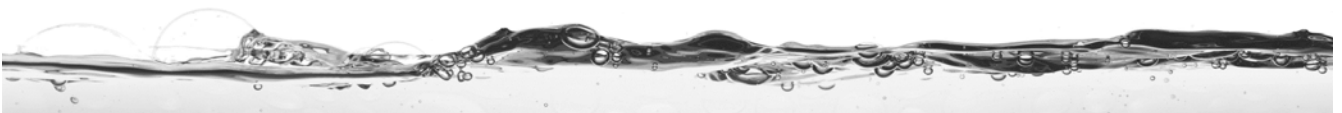
These warrants can be exercised starting from the end of the third calendar year following the year in which the warrants were offered and accepted, for a period of two years. The warrants can be 50% exercised during the first year and 100% during the second year of the exercise period. The warrants can only be exercised during the months of June and December and, if applicable, during other periods indicated by the board of directors or by a committee specially appointed for that purpose.

All warrants under this warrant scheme were offered to and accepted by employees, directors and persons providing special services to Ecodis.



Warrant Scheme 2 was issued in favour of PE Group NV and/or any third party who provides services in relation to the listing of the shares in the Company on Euronext in the Alternext segment. 246,440 warrants were allocated to PE Group NV. The exercise period is five years, but the warrants can only be exercised if certain conditions are fulfilled. More specifically, a first tranche consisting of 50% of the warrants offered to and accepted by the beneficiary (123,220) was exercised after the Banking, Finance and Insurance Commission has approved the Prospectus concerning the listing of the shares on Euronext in the Alternext segment. The balance can be exercised after the listing of the shares on Euronext, in the Alternext segment.

The warrants can only be exercised during the months of June and December and, if applicable, during other periods indicated by the board of directors or by a committee specially appointed for that purpose.



6. The Shareholders

6.1 Shareholders before the Offering^{9/10}

SHAREHOLDER	NUMBER OF SHARES	NUMBER OF WARRANTS	PERCENTAGE (DILUTED)
Ecodis Holding NV ¹¹	2,308,077	-	32.18
ANEL BVBA ^{12 13}	486,097	-	6.78
VEMA NV ¹⁴	446,830	-	6.23
Hervest Participations BV ¹⁵	707,280	-	9.86
Arcae NV ¹⁶	369,128	-	5.15
PE Group NV ¹⁷	469,115	123,220	8.26
Pieter Van Rompay	225,000	-	3.14
Geert Pepping	225,000	-	3.14
Various physical persons ¹⁸	846,550	-	11.81
Stichting Administratiekantoor Ecodis ¹⁹	215,143	-	3.00
Warrant holders	-	750,000	10.46
Total	6,298,220	873,220	7,171,440

⁹ Arcae NV and PE Group's control includes both direct and indirect shareholdings

¹⁰ Ecodis holds a call-option on 23,220 shares held by PE Group NV. The call option can be exercised following the listing of the shares on the Alternext segment of Euronext.

¹¹ Ecodis Holding NV is controlled by Elmar Peters and ANEL BVBA.

¹² ANEL BVBA is controlled by Elmar Peters and his spouse.

¹³ In May, ANEL BVBA sold a number of shares to Mr Geert Pepping and other investors. The reason is that ANEL BVBA was asked to exercise the warrants in its possession prior to the Offering. Given that ANEL BVBA had insufficient cash resources to do so, it sold shares to finance the exercise. These shares were sold at the Subscription price less a 15% discount. As the Subscription Price had not been set at that time, the number of shares sold can still be adapted. 385,428 Shares were transferred at the Prospectus Date.

¹⁴ VEMA BVBA is controlled by Marnix Vereecken.

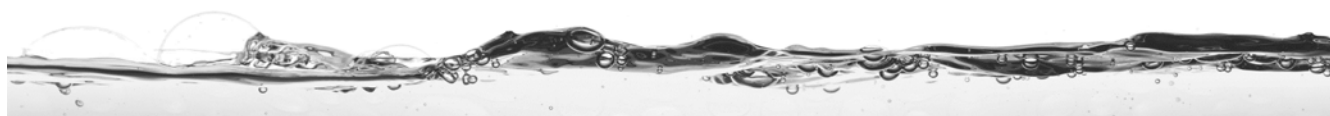
¹⁵ Hervest participations BV is indirectly controlled by Herman Spliethoff.

¹⁶ Arcae NV is controlled by Lieve Van Rompany, Stijn Van Rompay and Pieter Van Rompay

¹⁷ PE Group NV is controlled by Lieve Van Rompay, SVR Invest NV (Stijn Van Rompany), Pieter Van Rompay, Carl Vandecasteele, Kurt Greefs, AS Partners BVBA (Stefan Yee) and Arno Verhoeven

¹⁸ None of these persons holds more than 3% of the capital of Ecodis.

¹⁹ The administratiekantoor groups the shares of three physical persons (215,143 shares) and will, after the exercise of the warrants issued under the 29 December 2006 warrant plan will also group the shares issued in this way. This can involve 750,000 shares. See Chapter III.4.2. for a further description of this warrant plan.



6.2 Selling Shareholders

Each of the existing shareholders contributes pro rata of his own share holding to the Overallotment Option.

6.3 Shareholders after completion of the Offering

The expected shareholder structure upon completion of the Offering, based on the placement of the entire Base Offering and the complete exercise of the Overallotment Option, will be published in the Belgian financial press on 6 June 2007, along with the Subscription price (see Chapter I.4 above).

7. Announcement of significant participating interests

In accordance with Article 8 of the Royal Decree of 14 December 2006 concerning the Alternext financial instruments market, amending the Royal Decree of 5 March 2006 concerning market abuses, Articles 1 to 5, 8, 10, 11 and 18bis of the Act of 2 March 1989 on the publication of significant participating interests in market listed companies and regulation of public takeover bids are applicable to the Belgian issuers whose financial instruments are admitted for trading on Alternext. The Royal Decree of 10 May 1989 on the publication of significant participating interests in market listed companies has also been declared to be applicable to Belgian issuers whose financial instruments are admitted for trading on Alternext.

When reading the aforementioned Act of 2 March 1989 and the aforementioned Decree, every reference to regulated market must also be considered as a reference to Alternext. The thresholds referred to in these stipulations are replaced by the thresholds of 25%, 30%, 50%, 75% and 95%.

This means that declarations must be made to both the BFIC and the Company of:

- on the one hand, ownership of voting securities at the time when the Company is included in the listing on Alternext;
- on the other hand, acquisition or alienation of voting securities in the Company after it has been included for listing on this market; if the party making the declaration holds or exceeds the following thresholds of voting rights in the Company: 25%, 30%, 50%, 75% and 95%.

If the Company receives such a declaration, it will inform Euronext Brussels of this, which will publish this declaration.



8. *Public takeover bids*

Further to the law of 2 March 1989 concerning the disclosure of large shareholdings in companies listed on the stock exchange and regulating public takeover bids, as amended, and to the Royal Decree of 8 November 1989 concerning public takeover bids and changes in control of companies, as amended, public takeover bids for outstanding voting securities issued by a public company (including any securities giving right to subscription for, acquisition of or conversion into such voting securities) are subject to the supervision of the BFIC and may not commence prior to the approval by the BFIC of an offer prospectus. If the takeover bid results in the acquisition of 90% or more of the voting securities of the target, the takeover bid must be reopened to allow any remaining shareholders to sell their securities at the bid price.

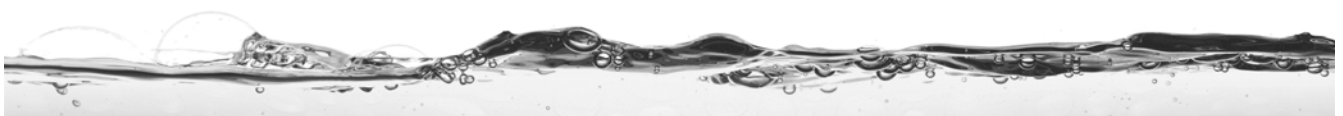
Under current law, a person intending to acquire, alone or in concert with others, a joint or exclusive controlling interest in a public company must notify the BFIC at least five banking days before the acquisition. The acquisition of a controlling interest is currently defined as an acquisition of voting securities or rights to acquire voting securities giving the purchaser the legal or de facto ability to decisively influence the appointment of a majority of the members of the Company's board of directors or the orientation of the Company's policy.

If the acquirer of a controlling interest pays a premium over the market value of the securities, it must make a public takeover bid or issue a standing order ("*koersshandhaving/maintien de cours*") for all of the Company's remaining voting securities (or rights to acquire voting securities). The consideration offered to the remaining security holders must equal the price paid to the seller or sellers of the controlling interest (if the controlling interest is acquired through a single acquisition of securities) or the highest price paid by the acquirer during the preceding 12 months (if the controlling interest is acquired through several acquisitions of securities).

The Company's ability to issue shares in the framework of its authorized capital with or without limitation of suppression of the preferential subscription rights of existing shareholders and to acquire its own shares (see sections 4.4.5 'Changes in the share capital' and 4.6 'Purchase and sale of own shares') in this chapter) and the rights to make appointments to the board of directors (see Chapter IV, Section 2. 'Board of Directors') may adversely affect a take-over bid for securities of the Company.

The above-mentioned legislation was amended by the Act of 1 April 2007 on public takeover bids, which was published on 26 April 2007 in the Belgian Official Gazette. These new regulations will enter into force on 1 September 2007. Certain parts of this act have still to be executed by Royal Decree.

Under the new regulations all shareholders and warrant holders (and holders of other securities carrying voting rights) must have equal rights to contribute their securities in any public bid. Whenever a person acquires more than 30% of the voting securities of a company that are (at least in part) admitted to negotiation on a regulated market, this person must, regardless of the price paid, make a mandatory takeover bid for the shares and warrants of the company at a price equal to the higher of the two following amounts (i) the highest price paid by the bidder or persons acting in concert with the latter for the acquisition of shares during the last 12 months, and (ii) the average of the trade price over the last 30 days before the obligation to launch a bid. No mandatory bid is required a.o. when the acquisition is the result of subscribing to a capital increase with application of the



preferential subscription rights of the shareholders. The price can be in cash or in securities. In the event of a voluntary or mandatory bid by a bidder who controls the company with a price composed of securities, an alternative in cash must be offered in the event that (i) the price does not consist of liquid securities admitted to trading on a regulated market or (ii) the bidder or a person acting in concert with the latter acquired shares for a payment in cash during a period of 12 months preceding the publication of the bid or during the takeover bid (whereby these shares, in the event of a voluntary takeover bid by a controlling shareholder represent more than 1% of the outstanding voting securities or securities giving voting rights). Where the voluntary takeover bid is issued by a controlling shareholder, the price must be supported by a fairness opinion issued by an independent expert. The board of directors of the target company is required to publish its opinion concerning the offer as well as its comments on the prospectus. The acceptance period for the bid must be at least 2 weeks and not more than 10 weeks.

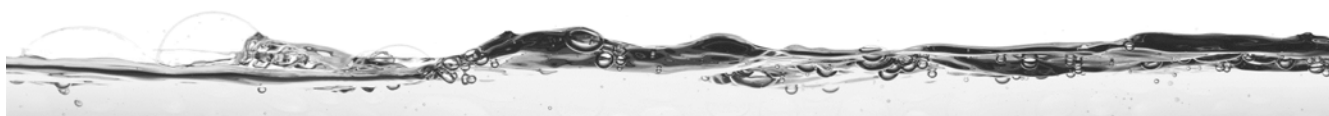
9. Squeeze-out bid

In accordance with Article 513 of the Companies Code, a person or legal entity acting alone or in concert, who owns 95% of the securities conferring voting rights in a publicly held company, can acquire all of the outstanding securities conferring voting rights or entitling to such voting securities in that company following a squeeze out offer.

The securities that are not voluntarily tendered in response to such offer are deemed to be automatically transferred to the bidder at the end of the procedure. At the end of the offer, the company is no longer deemed a publicly held company, unless bonds issued by the company, if any, are still publicly held. The consideration paid for the securities must be in cash and must represent the fair value of the securities so as to safeguard the interests of the transferring shareholders.

Under current law, following a public takeover bid the bidder may take advantage of a simplified squeeze-out procedure if it owns at least 95% of the target securities and has acquired 66% of the securities that it did not hold before the launch of the offer provided that the bidder disclosed that it may use such procedure in the relevant prospectus. Under the simplified procedure, the bidder may reopen its offer on the same conditions for 15 days as from the date of the publication of the results of the offer in order to complete a squeeze-out offer for the remaining securities.

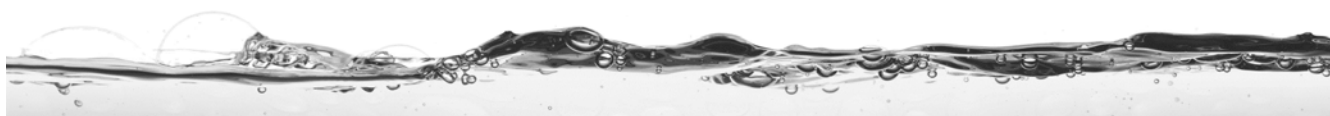
As from 1 September 2007, if the bidder holds, following a successful takeover bid, at least 95% of the voting capital and of the voting rights in the target company, the bidder is entitled to force the holders of all remaining voting securities and securities entitling to voting securities to sell their holdings to it at the price offered in the takeover bid if it has acquired in the takeover bid at least 90% of the voting securities. Furthermore, in such event the remaining shareholders and warrant holders are entitled to claim within 3 months from the end of the acceptance period of the takeover bid that the bidder acquires their securities for the price offered in the takeover bid.



10. Market abuse

Pursuant to Articles 9 to 13 of the Royal Decree of 14 December 2006 concerning the Alternext market for financial instruments and amending the Royal Decree of 5 March 2006 on market abuse, the following stipulations concerning market abuse are applicable to transactions in the Company's Shares:

- The prohibition of market abuse which can be punished under administrative law by the BFIC, as stipulated in Article 25 of the Act of 2 August 2002 on supervision of the financial sector and financial services and every stipulation which is made in implementation of this article;
- The criminal offences in relation to market abuse and insider trading, as detailed in Articles 39 and 40 of the aforementioned Act of 2 August 2002 and every stipulation which is introduced in implementation of these articles;
- The measures in relation to integrity and prevention of market abuse as stipulated in the above-mentioned Act of 2 August 2002 and clarified in the Royal Decrees of 5 March 2006 on market abuse and concerning the correct representation of investment recommendations and the disclosure of conflicts of interest, and more specifically:
 - the obligation for the Company to draw up a list of insiders;
 - the obligation for people with a leadership position in the Company (and related persons) to notify the BFIC of all transactions on their own account in specific financial instruments of the Company;
 - the obligation for qualified intermediaries in Belgium to notify the BFIC of all transactions which seem to be suspicious in the light of the prohibition of market abuse;
 - the obligations concerning the correct representation of investment recommendations and the disclosure of conflicts of interest.



Chapter IV: Corporate governance

1. General

This chapter contains an overview of the rules and principles in the area of corporate governance which are applied by the Company, in accordance with Belgian company law and the Articles of Association of the Company. The Company's corporate governance policy is based on the Articles of Association of the Company and on its corporate governance charter.

The Company's corporate governance charter is mainly based on the recommendations made in the Belgian Corporate Governance Code, which was published on 9 December 2004 by the Belgian Corporate Governance Commission (the "Code"). In principle the Company is not subject to the Code, since it is only applicable to companies which are listed on a regulated market.

The board of directors of the Company intends to comply with most of the provisions of the Belgian Corporate Governance Code.

The board of directors approved its corporate governance charter at its meeting on 28 March 2007. This will be published on the Ecodis website after the closing of the Offering. The committees referred to in the corporate governance charter have still to be composed. The board of directors will review this charter from time to time and make such amendments as it considers to be necessary and appropriate.

The corporate governance charter can be consulted free of charge, after the Offering is closed, at the website of the Company (www.ecodis.eu) and at the registered office of the Company.

The board of directors undertakes to set up a Nomination and Remuneration Committee and an Audit Committee. In view of the size of the Company, the board of directors has no plans to set up a management committee in accordance with Article 524*bis* of the Belgian Companies Code. The Articles of Association of the Company, however, provide for the possibility of setting up such a management committee.



2. Board of Directors

2.1 General Provisions

The board of directors has the fullest powers to make all decisions which are necessary or useful in order to realise the Company's object, with the exception of those powers which are reserved for the shareholders' meeting by the Companies Code or by the Articles of Association.

The board of directors has at least three and a maximum of fifteen members, who do not have to be shareholders. It consists of both executive directors and non-executive directors, each of which fulfil a specific and complementary role within the board of directors.

The executive directors provide the board of directors with all relevant business and financial information so that it can carry out its role effectively. The non-executive directors submit the strategy and the main lines of policy, as proposed by the executive management, to critical and constructive discussion, and help to elaborate it further. They review the performance of the executive management in detail in the light of the agreed targets.

With regard to the composition of the board of directors it will always be ensured that at least one-half of the members of the directors are non-executive directors.

At least half of the members of the board of directors are non-executive directors, of whom at least three directors must meet the independence criteria stipulated in the Articles of Association of the Company.

If a legal entity is appointed as a director, it shall appoint a permanent representative from among its shareholders, directors or employees, who will be responsible for discharging the duties on behalf and on account of the said legal entity.

New directors are elected at shareholders' meetings for a renewable term of up to 4 years. The shareholders' meeting may suspend or dismiss a director at any time. If a position on the board of directors becomes vacant, the remaining directors have the right to appoint temporarily a new director to fill the vacancy until the first shareholders' meeting that is held after the position became vacant. The appointment will be placed on the agenda of the following shareholders' meeting. The new director completes the term of the director whose mandate became vacant. If the number of directors, for any reason whatsoever, has fallen below the minimum number of directors prescribed by law or by the Articles of Association, and for as long as the shareholders' meeting does not fill the vacancy, the directors whose mandates have expired shall remain in post.

Meetings of the board of directors shall be convoked by the Chairman, the person responsible for day-to-day management or by two directors, whenever the interests of the Company require it. The board of directors can only deliberate validly if at least half its members are present or represented. If this quorum is not met, a new board meeting with the same agenda can be convened to validly deliberate and vote if at least two directors are present or represented. In exceptional circumstances, when justified by an emergency and if required in the Company's interest, the board of directors can take decisions in writing



without a meeting, provided such decisions are taken unanimously. Meetings of the board of directors can be validly held in the form of a video or telephone conference. In such cases the meeting is deemed to have been held at the registered office of the Company if at least one director was physically present at the registered office of the Company.

The meeting shall be chaired by the Chairman of the board of directors. If the Chairman is unable to attend, the board of directors shall be chaired by a director who is appointed for this purpose by his colleagues.

The minutes of the board of directors provide a summary of the discussions that have taken place within the board of directors, indicate what resolutions have been passed and mention any reservations on the part of specific directors.

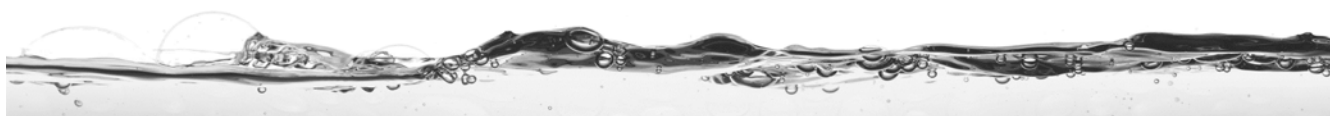
At least half the members of the board of directors of the Company are appointed by the shareholders' meeting on proposal from Elmar Peters or, after the transfer, the Purchasing Entity, or, but only after the death of Elmar Peters and if he or the Heirs has not or have not transferred the majority of the Principal Shares to a Purchasing Entity, the Heirs who hold Principal Shares, as long as Elmar Peters, the Heirs and/or the Purchasing Entity, together with the Collaborating Shareholders, jointly hold(s), either directly or Indirectly, a minimum of twenty (20) percent of the shares in the Company. If they directly or Indirectly hold less than twenty (20) percent of the shares in the Company, at least one director shall be appointed for each block of four (4) percent of the shares, which they hold either directly or Indirectly, on proposal from Elmar Peters or the Purchasing Entity, or, but only after the death of Elmar Peters and if he or the Heirs has not or have not transferred the majority of the Principal Shares to a Purchasing Entity, the Heirs who hold Principal Shares. The proposal shall take place by means of a list comprising a number of candidates equal to a number which is higher than the number of director's mandates for which candidates can be proposed pursuant to Article 15.2 of the Articles of Association.

If a director's mandate for which candidates have been proposed in accordance with the previous paragraph, Elmar Peters or the Purchasing Entity or, but only after the death of Elmar Peters and if he or the Heirs has not or have not transferred the majority of the Principal Shares to a Purchasing Entity, the Heirs who hold Shares, shall be entitled to propose candidates for the said director's mandate, and the shareholders' meeting shall be obliged to select the director from among these candidates. A list comprising a number of candidates which is at least equal to a number higher than the number of vacant director's mandates for which candidates can be proposed pursuant to this paragraph, must be disclosed.

If, in the absence of unanimity, several individuals are entitled to propose candidates, those candidates will be proposed who are proposed by those individuals who directly or Indirectly hold the most shares in the Company; in the case of equal votes, the shareholders' meeting may choose freely between all candidates proposed by these individuals.

Elmar Peters, the Purchasing Entity or the Heirs shall inform the board of directors of the Company in writing of the identity of the Purchasing Entity and of any Collaborating Shareholder.

In the previous four paragraphs, the following terms are defined as follows:



"Heirs" means all heirs by direct relationship of Elmar Peters and the wife of Elmar Peters;

"Principal Shares" means the shares in the Company and the shares in the company (companies) held by Elmar Peters or the Heirs in companies which directly or Indirectly hold shares in the Company;

"Purchasing Entity" means any legal entity of Belgian or foreign law to which Elmar Peters or the Heirs has or have transferred the majority of the Principal Shares;

"Indirect(ly)" means the holding of shares in the Company via one or more legal entities in which the person or persons in question jointly, either directly or otherwise (i) holds or hold the majority of the voting rights, or (ii) can appoint or propose the majority of the directors;

"Reference Shareholder" means one of the following persons, who directly or Indirectly holds the majority of the shares in the Company: Elmar Peters, the Heirs (who, for the purposes of this description, are seen as a single person) or the Purchasing Entity;

"Collaborating Shareholder" means (i) every legal entity who, directly or Indirectly, holds shares in the Company and over which the Reference Shareholder(s) exercise or exercises control in the sense of Article 5 of the Companies Code; and (ii) every person with whom Mr Elmar Peters, the Heirs and/or the Purchasing Entity acts in concert with (as described in Article 606 of the Companies Code);

"Company" means Ecodis NV.

2.2 Chairman

The board of directors shall elect a Chairman from among its members.

The Chairman of the board of directors leads the board of directors. He or she takes the necessary measures with a view to creating an atmosphere of support for the decisions of the board of directors. The Chairman stimulates effective interaction between the board of directors and the executive management. The Chairman maintains close contacts with the CEO and offers support and advice, with respect for the executive responsibility of the CEO.

Within the board of directors, the Chairman is primarily responsible for the following tasks:

- The Chairman defines the agenda for board meetings, after consultation with the CEO.
- The Chairman ensures that procedures in relation to preparation, deliberation, approval of resolutions and implementation of resolutions take place correctly.
- The Chairman ensures that the directors receive accurate, timely and clear information before the meetings, and, if necessary, between the meetings. He ensures that all directors receive the same information.
- The Chairman chairs the meetings of the board of directors and ensures that the board of directors functions and is able to pass resolutions as a collegiate body.
- The Chairman of the board of directors, or another non-executive director, leads the appointment



process, in consultation with the Nomination and Remuneration Committee. Where a new appointment is made, the Chairman satisfies himself that the board of directors, before considering a candidate - has sufficient information about the candidate.

- The Chairman ensures that newly appointed directors receive appropriate initial training.
- The Chairman leads the appraisal process for the board of directors.

2.3 Independent Directors

A director is considered to be independent if he at least satisfies the following criteria:

1. the director must not, at the time of his first appointment as a director of the Company, for a period of two years prior to his appointment in the Company, have held a mandate or position as director, manager, member of the management committee, day-to-day manager or executive in the Company or in an associated company (in the sense of Article 5 of the Companies Code); and

2. the director must not have a spouse, person with whom he legally cohabits or relative by blood or marriage up to the second degree, who holds a mandate or position as a director, manager, member of the management committee, day-to-day manager or executive in the Company or in an associated company (in the sense of Article 5 of the Companies Code); and

3. a.) the director must not hold any rights over the Company amounting to one-tenth or more of the capital, of the equity or of any class of shares in the Company;

b) if the director holds rights over the Company that represent a proportion of less than 10%:

- those rights over the Company, plus the rights which are held over the same company by companies over which the independent director has control, must not amount to one-tenth of the capital, the equity or a class of shares in the Company;

or

- acts involving disposal of these shares or exercise of the associated rights must not be subject to agreements or unilateral undertakings which the independent director has undertaken;

4. the Director must not have a spouse, person with whom he legally cohabits or a relative by blood or by marriage up to the second degree, who has a financial interest as stipulated under 3. above; and

5. in the opinion of the Nomination and Remuneration Committee, the Ddirector is not maintaining any relationship with the Company which, by its nature, is likely to jeopardise his independence.



Ecodis will announce which directors are considered to be independent. If one or more of the above-mentioned criteria is not met, Ecodis will provide an explanation of why it nevertheless considers this director to be independent.

Every independent director who no longer meets the independence requirements must inform the board of directors of this immediately. The director in question shall indicate which of the above conditions he no longer fulfils and the reason for this.

2.4 Composition of the Board of Directors

The board of directors is composed of seven members. These are:

Name	Position	Date of appointment	Mandate	Professional address
Ecodis Holding NV, having as its permanent representative: Elmar Peters ²⁰	Managing Director	19 July 2002	2008	Leopoldslei 78, 2930 Brasschaat
Leon Van Rompay	Chairman	29 December 2006	2010	Joseph Wauterslaan 9, 1981 Hofstade
Guido Verswijvel	Director	15 November 2005	2011	Brechtsebaan 30, 2900 Schoten
Herman Spliethoff	Director	15 November 2005	2011	Brechtsebaan 30, 2900 Schoten
Marcel Asselberghs	Director	18 May 2007	2011	Brechtsebaan 30, 2900 Schoten
Luc Van den Bossche	Director	18 May 2007	2011	Brechtsebaan 30, 2900 Schoten
Carmen Cordier	Director	18 May 2007	2011	Brechtsebaan 30, 2900 Schoten

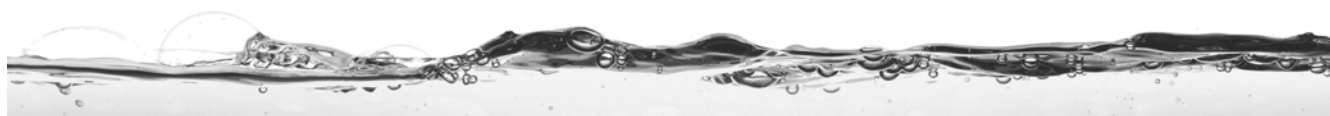
Carmen Cordier, Marcel Asselberghs and Luc Van den Bossche are considered to be independent directors. Leon Van Rompay chairs the board of directors of the Company.

The curriculum vitae of the members of the Board of Directors is set out below:

Carmen Cordier – Independent Director

Carmen Cordier obtained a Master of Science in Electrical Engineering (Telecommunications option) from the Catholic University of Leuven and a Master in Business Administration (Oxford University - Saïd

²⁰ Ecodis Holding NV is a shareholder in Ecodis and is also associated with Anel BVBA.



Business School, UK). She began her career as a Project Leader/Analyst at Fortis in Belgium. In 1992 she transferred to Telindus, working in the sales department in Belgium, where she managed a number of major accounts. Carmen Cordier then acted as Investor Relations Officer, playing a major role in defining the merger and acquisition strategy of the Telindus Group. She subsequently moved to the United Kingdom, taking P&L responsibility for the local operations of CellStack Systems. After that she became Corporate Director Surveillance, and finally, in October 2003, Vice President Strategy. In this function Carmen Cordier focused on the new strategy, that was permanently reviewed to ensure the continuous growth (both internal and external) of Telindus's activities. At the end of March 2007, following the acquisition of the Telindus Group by Belgacom, Carmen Cordier ended her operational function at Telindus, whilst remaining a board member of Telindus Group NV, Telindus Belgium NV and Telindus Luxemburg S.A. Carmen Cordier is also a director of Punch Telematix NV.

Marcel Asselberghs – Independent Director

Marcel Asselberghs is a graduate in accounting and teacher of accounting and related disciplines. He has also been approved by the Banking, Finance and Insurance Commission as a company auditor. After completing his studies he went to work for Philips NV where he worked in the Internal Audit department. In 1964 Marcel Asselberghs left Philips and went to work for Arthur Andersen, where he became a partner and, in 1978, head of the Audit department. In 1982 he was appointed Managing Partner for the Be-Lux offices. During his career Marcel Asselberghs was statutory auditor of e.g. Bekaert, C.F.E., Sioen, Terbeke, Sunair Groep, Associated Weavers, Outboard Marine, Haven Zeebrugge, Robert Bosch, V.T.M., Europabank, Merck Sharp and Dohme, Baxter Laboratories, etc. He is the author of a number of publications and was and still is a regular speaker and lecturer on a number of accountancy subjects. He is also a former National Vice-Chairman of the Belgian College of Accountants. Since 1998 Marcel Asselberghs has been an honorary company auditor and honorary bank auditor, and still works as director of several companies, including Carestel, Brouwerij Haacht, Veritas Groep, Assur Voyage, Rode Kruis Vlaanderen, etc. He is also still a consultant for Tertio and Groep Vanmoerkerke.

Luc Van den Bossche – Independent Director

Luc Van den Bossche obtained his doctorate in Law in 1970 from the University of Ghent. He began his legal career at the bar in Ghent. At the same time he lectured in a number of Belgian colleges. He has acquired unique experience of Flemish and Belgian politics, and has been a minister in several governments for 15 years.

Luc Van den Bossche has an impressive political background. He was first a member of the government in 1988, when he became Secretary of State for Education. Since then he has maintained a constant presence at the top of Belgian politics. He has successively been Community Minister for Home Affairs and the Civil Service (1988-1992), Flemish Minister for Education and Civil Service Affairs (1992-1995), Vice-President of the Government of Flanders and Flemish Minister for Education and Civil Service Affairs (1995), Deputy First Minister and Minister of Home Affairs (1998-1999), Deputy First Minister and Minister of Home Affairs, responsible for Public Health (1999), and Minister for Civil Service Affairs and



Modernisation of Public Administrations (1999-2003). In 1993 he was also Chairman of the European Council of Ministers for Education.

After his political career Luc Van den Bossche became Chief Executive Officer of "Brussels International Airport Company" (BIAC).

Guido Verswijvel - Director

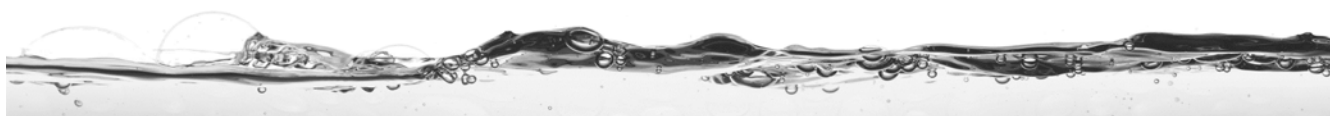
Guido Verswijvel received his Masters Degree in Applied Economics (econometrics and IT) from UFSIA (Antwerp) and completed the Doctorate Course there (major in marketing and minor in finance). He was also awarded an MBA (specialising in finance) from INSEAD (Fontainebleu, France), where he was a research assistant to the marketing department from 1985 to 1987. He then worked as a consultant for McKinsey, and then for Generale Bank as Director of Strategic Studies and Projects then as Director of Credits. Guido Verswijvel is currently Strategic Consultant for a number of financial institutions and founder/CEO of Finpower NV, a financial consultancy for SMEs. He is also Professor of Service-Marketing at CEDEP (INSEAD). Guido Verswijvel is a Director of a number of medium-sized enterprises.

Leon Van Rompay – Chairman

Leon Van Rompay graduated in chemistry in 1972. He went to work immediately in the pharmaceuticals sector, as a medical sales representative at Continental Pharma – Searle, as Field and Promotion Manager at Bayer and as Sales Director at Glaxo. In 1983 he moved to Zambon where in 1986 he was appointed General Manager. A few years later he became Area Director with ultimate responsibility for the Zambon business in the Benelux, German, US and Scandinavia. This was followed by responsibility for the former Eastern Block countries and the Far East. As Area Director he was at the same time responsible for the worldwide coordination of the pharmaceuticals division. Leon Van Rompay left Zambon in 1999 to start up Docpharma NV, which in its first years was one of the fastest growing companies in Belgium. As a listed company Docpharma NV was sold in 2005 to Matrix Laboratories Inc. A few months later Leon Van Rompay was appointed a director of Matrix Laboratories Inc. in India. He continues to work for the Docpharma Group as a director and consultant.

Herman Spliethoff – Director

Herman Spliethoff studied Geology (University of Utrecht), Environmental Sciences and Information Technology, and obtained an MBA at the University of Geneva and an Executive MBA at Carnegie Mellon University (Pittsburgh, USA). In 1991 he began his career in KMPG's environmental consulting group. From there he moved to Lloyd's Register to set up a new environmental department and – as a 'test country' for Lloyd's world-wise – to obtain accreditation for ISO 14001 certification. As a registered Lead auditor (IRCA) he audited the fulfillment of industrial standards by over 150 industrial and service countries. At Holland Consulting Group Herman Spliethoff led various organizational change, process improvement and quality control projects. He is a co-founder of Holland Performance Centre, HCG's expertise centre for these subjects, for which he has developed training programmes and courses. At the end of 2002 he was responsible as Chairman for the restructuring of the Hadwaco Group, a Finnish company that developed and sold its own water purification technology. As the appointed representative of





an international group of private investors, Herman Spliethoff was responsible for the group strategy and the implementation of the business plan. This company was sold in 2005 to a Japanese technology group.

Since 2005 Herman Spliethoff has been a partner and director of QAT investments, a venture capital group active in Benelux, investing in early stage technology companies. As such he is co-responsible for the investment and divestment policy and management of the shareholdings.

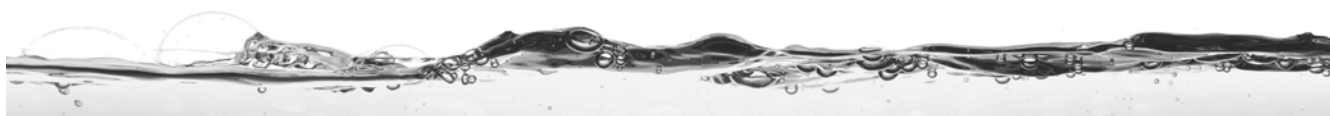
In addition he has been closely connected since 1987 as an investor and a member of the Supervisory Board in the Spliethoff Group, a shipping company founded by his great-grandfather in 1921. He is a Supervisory Board member of Big Lift Shipping and 'short sea shipping' company Wijnne & Barends, both belonging to the Spliethoff Group.

Elmar Peters – Permanent representative of Ecodis Holding NV, Managing Director

Elmar Peters graduated in mechanical engineering. After working for a number of years at Samga NV (Port of Antwerp) as head of technical services, he took on in 1985 the assignment of sales manager Benelux of Chronos Richardson GbH. In 1992 he moved to Berries Air Filter NV, where he was responsible as a partner for the sales and marketing of industrial dedusting and air treatment installations. In 1996 Elmar Peters became a partner in Adviesbureau pH7 NV, an environmental consultancy. At the end of 1997 he began research into low-chemical water purification technologies, which in 2002 he contributed to Ecodis. Via Ecodis Holding NV Elmar Peters is managing director of Ecodis.

At the date of this Prospectus, none of the directors of the Company has, during the past five years:

- been convicted of fraud;
- held an executive post as senior manager or member of the administrative governing or supervisory bodies of a company at the time of or prior to its bankruptcy, receivership or dissolution; been the subject of any official public accusation and/or sanction by a public or regulatory authority (including a professional body appointed for that purpose); or
- ever been relieved of its duties as a member of the administrative, governing or supervisory bodies of a company, or deprived of its governing or executive activity in any company.



3. Committees within the Board of Directors

3.1 General

In order to pursue an effective and efficient policy, the board of directors sets up specialised committees to analyse certain specific matters and to advise the board of directors on these matters. Decisions, however, are still made by the board of directors, which retains its collegiate authority. The board of directors defines the internal regulations of each committee, in which the role, the composition and the functioning of each committee is described in detail. The board of directors is also authorized to appoint the members and a chairman of each committee.

The board of directors will set up an Audit Committee and a Nomination and Remuneration Committee and currently has no plans to set up any other committees, since it takes the view that the size of the Company does not justify the formation of such committees.

3.2 Audit Committee

The Audit Committee of the Company consists of at least three directors, all of whom are independent directors. The Audit Committee assists the board of directors in carrying out its supervisory role with a view to maintaining control in the widest sense.

The Audit Committee must inform the board of directors clearly and regularly of the performance of its mission and all matters in relation to which the Audit Committee considers that action needs to be taken or improvement is needed, and makes recommendations concerning necessary steps that need to be taken.

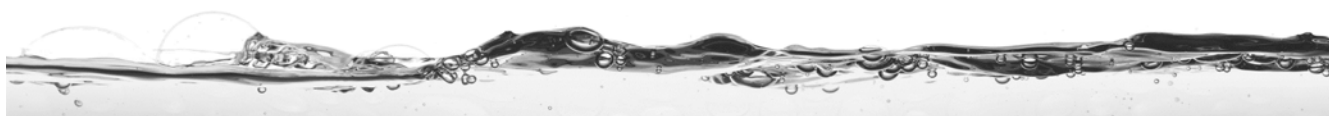
The Audit Committee is responsible for working out an audit plan covering all activities of Ecodis, particularly comprising supervision of the aspects set out below.

Financial reporting

The Audit Committee supervises the integrity of the financial information supplied by Ecodis, in particular by making an assessment of the relevance and consistency of the accounting standards applied by Ecodis, including the criteria used for consolidation of the accounts of the various companies in the group.

This supervision includes an assessment of the accuracy, completeness and consistency of the financial information. This supervision relates to the regular information before it is announced, and it is based on an audit plan that has been approved by the Audit Committee.

The management informs the Audit Committee of the methods that are used to enter significant and unusual transactions where these might be handled in the accounts in different ways. In this connection,



special attention is paid to the existence of, and justification for, every activity which the Company develops in offshore centres and/or via so-called 'special purpose vehicles'.

The Audit Committee discusses significant questions in relation to financial reporting with both the executive management and the statutory auditor.

Internal audit and risk management

At least once each year the Audit Committee investigates the systems of internal audit and risk management which are set up by the executive management, to satisfy itself that the principal risks are properly identified, managed and disclosed to it.

The Audit Committee checks the declarations concerning internal audit and risk management which are made in the annual report.

The Audit Committee investigates the special arrangements under which personnel of the Company are able to express their concerns, in confidence, in relation to possible irregularities of financial reporting or other matters. The Audit Committee is responsible for developing a procedure according to which personnel can inform the chairman of the Audit Committee directly. In this process the committee takes the greatest possible care over the confidentiality of the complaint or the anonymity of the person making a complaint.

If it is considered to be necessary, arrangements are made for an independent audit and appropriate follow-up of these matters, in relation to their alleged seriousness.

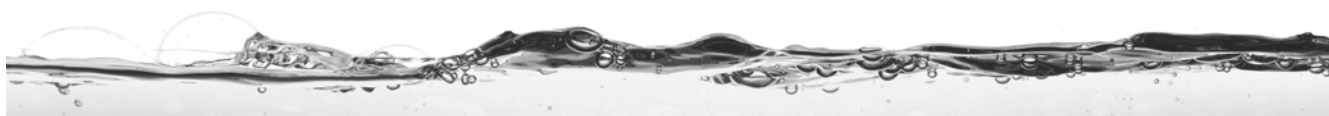
Internal audit process

In view of the limited size and complexity of Ecodis, no independent internal audit role has been created.

The Audit Committee checks at least once each year whether there is a need for this. If applicable an independent internal audit role will be created which will be given resources and know-how commensurate with the nature, size and complexity of the Company.

The Audit Committee assesses the effectiveness of internal audit and, in particular, makes recommendations on the selection, appointment, reappointment or dismissal of the head of internal audit and concerning the budget that is allocated to internal audit. The Audit Committee reviews the work plan for the internal auditor, taking into account the complementary roles of internal and external audit.

It receives the internal audit reports or a regular summary of these.



The Audit Committee also ascertains the extent to which the management is complying with its findings and recommendations.

As well as maintaining an effective working relationship with the management, the internal auditor must have guaranteed free access to the board of directors. The Audit Committee also acts as the main point of contact for the internal auditor.

The head of internal audit must have direct and unlimited access to the chairman of the Audit Committee and the Chairman of the Board of Directors.

External audit process

The Audit Committee makes recommendations to the board of directors on the selection, appointment and reappointment of the statutory auditor and on the conditions for his or her appointment. In accordance with the Companies Code, this proposal is submitted to the shareholders for approval.

The Audit Committee initiates a review of the questions that give rise to the dismissal of the statutory auditor and makes recommendations concerning all actions which are needed in that connection.

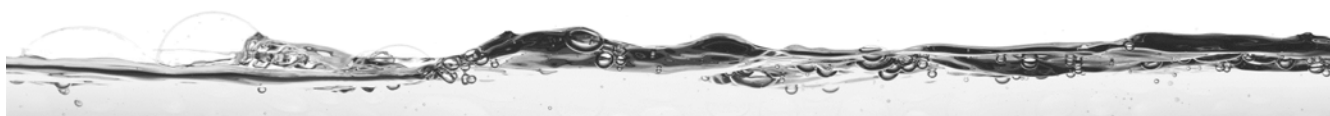
The Audit Committee monitors the independence of the statutory auditor, primarily in the light of the stipulations of the Companies Code and the Royal Decree of 4 April 2003. The committee receives a report from the statutory auditor describing any links that may exist between the statutory auditor and Ecodis and its group.

The Audit Committee is informed of the Statutory Auditor's work plan. The Committee is informed in good time of all matters that may arise from the audit.

The Audit Committee evaluates the effectiveness of the external audit process and ascertains to what extent the management is meeting the recommendations made by the statutory auditor in his 'management letter'.

The Audit Committee also monitors the nature and scope of non-audit duties that are entrusted to the statutory auditor. The committee determines and implements a formal policy concerning the type of non-audit duties which: a) are prohibited, b) are permissible after checking by the committee, and c) are permitted without calling upon the committee, in view of the specific requirements set out in the Companies Code.

As well as maintaining an effective working relationship with the management, the statutory auditor must have guaranteed free access to the board of directors. The Audit Committee also acts as the main point of



contact for the statutory auditor. The statutory auditor must have direct and unlimited access to the Chairman of the Audit Committee and the Chairman of the Board of Directors.

3.3 Nomination and Remuneration Committee

The board of directors has decided that the Nomination Committee and the Remuneration Committee as stipulated by the Belgian Corporate Governance Code will be merged into a single committee, named the Nomination and Remuneration Committee.

The Nomination and Remuneration Committee consists exclusively of non-executive Directors. It consists of at least three members who have sufficient relevant expertise to allow the committee to carry out its role effectively. At least one of the members of this committee is independent.

The Nomination and Remuneration Committee analyses certain specific matters in relation to the policy on remuneration and appointments and advises the board of directors in this connection.

The Nomination and Remuneration Committee has, in particular, the following responsibilities:

Concerning remuneration

The Nomination and Remuneration Committee makes proposals to the board of directors on the remuneration policy for non-executive directors, as well as the proposals for remuneration arising from these which have to be submitted to the shareholders' meeting.

The Nomination and Remuneration Committee makes proposals to the board of directors on the remuneration policy for the executive management. This includes at least the following aspects:

- the main contractual stipulations, including the most important characteristics of pension plans and departure schemes;
- the key elements involved in determining remuneration, including the relative importance of each component of remuneration, the performance criteria which apply to the variable elements and benefits in kind.

The Nomination and Remuneration Committee makes recommendations on the individual remuneration of the directors and the members of the executive management, including bonuses and long-term incentives, either linked to shares or otherwise, in the form of share options or other securities.

The Nomination and Remuneration Committee has a discussion at least once each year with the CEO on the operation and performance of the executive management.



On appointments

The Nomination and Remuneration Committee makes recommendations to the board of directors on the appointment of directors. The committee ensures that the appointment and reappointment process is always objective and professional.

More specifically the Nomination and Remuneration Committee must:

- elaborate appointment procedures for directors;
- periodically evaluate the size and composition of the board of directors and make recommendations to the board of directors on changes to it;
- if there are director's mandates open, search for candidates, draw up a profile of them and, if applicable, present these to the board of directors for approval;
- offer advice on appointment proposals coming from shareholders;
- give due consideration to matters relating to succession;
- assist the board of directors in the appointment and monitoring of the executive management.

3.4 Chief Executive Officer and Executive Management

The board of directors has entrusted the day-to-day running of the Company to a single director, who bears the title of managing director or Chief Executive Officer ("CEO").

The executive management comprises all the executive directors, including the CEO.

The powers which are delegated to the CEO cannot relate to the general policy of the Company or other actions which are reserved for the board of directors on the basis of legal stipulations or the Articles of Association or the corporate governance charter of the Company.

Ecodis Holding NV, whose permanent representative is Elmar Peters, is the CEO of the Company.

Responsibilities

The executive management:

- is responsible for running Ecodis;
- creates internal control systems (these are systems for identifying, evaluating, managing and monitoring financial and other risks), without prejudice to the supervisory role of the board of directors;
- is responsible for the full, timely, reliable and accurate preparation of the annual accounts of Ecodis, in accordance with the accounting principles and policies which exist in this connection;
- gives the board of directors a balanced and clear assessment of the financial situation of Ecodis;



- provides all information to the board of directors, in good time, which the board of directors needs in order to discharge its duties;
- gives an account to the board of directors for the discharge of its responsibilities.

The CEO meets the Chairman of the Board of Directors on a regular basis, constantly involves him in strategic initiatives, conducts regular consultations with him on all relevant questions and in particular on the agenda items of board of directors meetings and of the specialised committees.

Ecodis is validly represented for the purpose of all its day-to-day management activities by the CEO, who does not have to offer third parties any proof of a prior resolution of any body of the Company whatsoever.

4. Remuneration of the Directors and the Executive Management

The remuneration must be sufficient in order to recruit, retain and motivate directors and members of the executive management who satisfy the profile defined by the board of directors.

Proposals from the Nomination and Remuneration Committee on remuneration of non-executive directors must take into account the following points:

- the remuneration of non-executive directors takes into account their responsibilities and time expended.
- non-executive directors do not receive any performance-linked remuneration such as bonuses or share-related incentive programmes in the long term, or any benefits in kind or benefits linked to pension plans.

Proposals from the Nomination and Remuneration Committee on remuneration of the executive management must take into account the following points:

- the level and structure of the remuneration of the executive management is such that qualified and expert professionals can be recruited, retained and motivated, taking into account the nature and scope of their individual responsibilities;
- in order to match the interests of the members of the executive management to those of the Company and its shareholders, an appropriate proportion of their remuneration package is linked to the performance of the company and to individual performance. If members of the executive management are eligible for a bonus, its award must depend on relevant and objective performance criteria developed to have a positive influence on the value of the Company. Evaluation and assessment procedures are created in relation to the performance of members of the executive management;
- systems on the basis of which the members of the executive management are remunerated in the form of shares, share options or any other entitlement to acquire shares, are approved beforehand by the shareholders via a resolution at the shareholders' meeting;



- if a member of the executive management is also an executive director, the payment which he receives in the latter capacity is taken into account in determining his remuneration.

With regard to the remuneration of executive directors, the stipulations concerning remuneration of non-executive directors are applied to executive directors in their capacity as directors, and stipulations concerning the remuneration of the executive management apply to executive directors in their capacity as executive managers.

Obligations in relation to payments in the case of early retirement schemes are reviewed in detail. It is not intended that poor performance should be rewarded.

Ecodis discloses the overall remuneration and other benefits to its directors and members of the executive management in the corporate governance chapter of the annual report.



5. *Shares and warrants owned by Directors and the Executive Management*

The table below contains an overview of the shares and warrants which are directly or indirectly owned by the directors on the date of this Prospectus.

Name of director	Number of shares	Number of warrants
Leon Van Rompay	0	100,000
Ecodis Holding NV	2,284,857 ²¹	0
Guido Verswijvel	0	70,000 ²²
Herman Spliethoff	707,280 ²³	0
Carmen Cordier	0	0
Marcel Asselberghs	0	0
Luc Van den Bossche	0	0

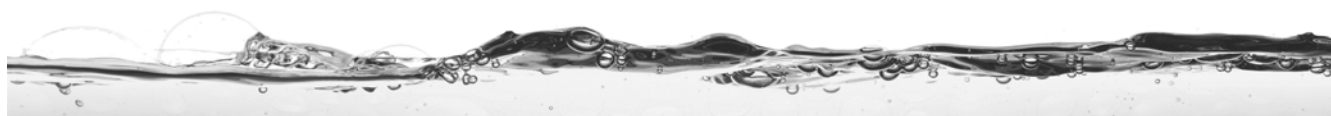
6. *Statutory Auditor*

The statutory auditor of the Company is VMB Bedrijfsrevisoren CVBA, having its registered office at Entrepotkaai 3, 2000 Antwerpen, represented by Mr Alain Bolssens, company auditor and member of the Belgian Institute of Company Auditors. The statutory auditor of the Company was appointed at the extraordinary shareholders' Meeting on 8 January 2007 with a renewable mandate of three years which expires immediately after the end of the annual shareholders' meeting in 2009.

²¹ Ecodis Holding NV and ANEL BVBA are both controlled by Elmar Peters. ANEL BVBA holds 475,402 shares.

²² Of these 50,000 warrants are held by Guido Verswijvel himself and 20.000 by his wife Cynthia Verswijvel-Cornelissen.

²³ These shares are held indirectly via Hervest Participations NV.



7. Transactions by Directors and transactions with associated companies. Conflicts of interest on the part of the Directors and the Executive Management

7.1 Conflicts of interest on the part of directors

Article 523 of the Companies Code contains special stipulations which must be complied with whenever a director either directly or indirectly has an asset-related conflict of interests in relation to a decision or transaction that belongs to the sphere of the board of directors.

In accordance with Article 523, § 1 of the Companies Code, the director who, either directly or indirectly, has an asset-related conflict of interests, must disclose this to the other directors before the meeting of the board of directors takes a decision on the matter for which the said conflict of interests exists. His/her declaration and the grounds for justifying the said conflict of interests must be included in the minutes of the board of directors' meeting which must pass the resolution.

With a view to its publication in the annual report, the board of directors shall describe in the minutes the intended decision or transaction and give an account of the resolution that is passed. The consequences of this decision on the assets of the Company must also be disclosed in the minutes, and the annual report must include the aforementioned minutes in full.

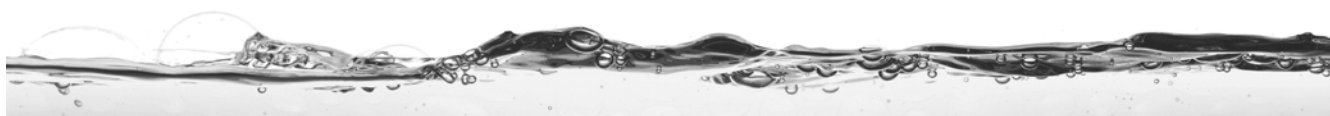
If the Company has appointed one or more statutory auditors, the director in question must also inform the said statutory auditor(s) of his/her conflict of interests. The (annual) report of the statutory auditors must include a separate description of the consequences on the assets of the Company of the resolutions of the board of directors in connection with which a conflict of interests exists.

If the Company makes or has made a public appeal to savings, the director concerned must not take part in the deliberations or voting by the board of directors on the transactions or decisions in relation to which a conflict of interests exists.

In the event of failure to comply with the above, the Company may request that decisions or transactions that have taken place contrary to these stipulations be annulled, if the counterparty to the said decisions or transactions was or should have been aware of the said infringement (Article 523, § 2 of the Belgian Companies Code).

Article 523, § 1 of the Companies Code is not applicable:

- if the decision or transaction that falls within the authority of the board of directors, relates to decisions or transactions which came about between companies, where one directly or indirectly owns at least 95% of the votes associated with the entirety of the securities issued by the other company, or companies where at least 95% of the votes associated with the entirety of the



securities issued by them are owned by another company (Article 523, § 3, para. 1 of the Belgian Companies Code); or

- if the decision by the board of directors concerns normal transactions which take place under the conditions and subject to the securities which are usually applicable in the market for such transactions (Article 523, § 3, para. 2 of the Belgian Companies Code).

At present the directors have no conflict of interests in the sense of Article 523 of the Belgian Companies Code which have not been disclosed to the board of directors. It is not expected that such conflicts of interests will arise in the foreseeable future, except for decisions concerning management agreements and the issue of warrants.

The Company has also created a policy comprising the standards in relation to conflicts of interest which are not covered by the conflicts of interest regulation, as stipulated in Article 523 of the Companies Code.

All directors and members of the executive management are expected to avoid actions, positions or interests which conflict with the interests of Ecodis or seem to do so.

For all transactions between Ecodis and directors or members of the executive management or their permanent representatives, approval by the board of directors is required. If, for example, they wish to conclude contracts with Ecodis, either directly or indirectly, concerning the supply of goods or services for payment (other than the services rendered in the context of their mandates), they must always obtain express authorization from the board of directors for this.

If directors or members of the executive management or their permanent representatives, face a potential conflict of interests arising from a decision or transaction by Ecodis, they must inform the Chairman of the Board of directors of this without delay. Conflicts of interest include, in particular, all diverging interests in relation to ownership, functional or political interests or interests in which family members up to the second degree are involved.

If the regulations set out in Article 523 of the Companies Code is not applicable, the existence of the potential conflict of interests will be noted and the director in question or the member of the executive management will be assumed to refrain from the vote in question.

This policy also applies to all directors in their capacity as members of one of the specialist committees of the board of directors. Consequently they must inform the Chairman of the board of directors of all personal financial interests (except in their capacity as shareholders) or conflicts of interest on which the committee in question decides or which arises from any other mandate which they hold. They must not participate in deliberations and voting in relation to resolutions of the committee affected by the conflict of interests.



On the Prospectus Date, the Company is aware of two potential conflicts of interest. Firstly Mr Guido Verswijvel is a director of the Company and also co-founder of NV Finpower which provides services to the Company. Secondly Mr Elmar Peters is the permanent representative of Ecodis Holding, the Chief Executive Officer and also the principal shareholder of the Company, and a shareholder in ANEL BVBA.

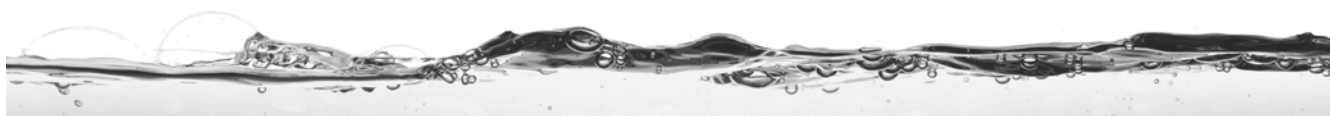
The Company has no knowledge of any potential conflicts of interests other than those disclosed above.

7.2 Transactions with associated companies

Article 524 of the Companies Code, which will be applicable to the Company following execution of the Offering, provides for a special procedure which must be followed whenever decisions or transactions of the Company concern the relations between the Company on the one side and its associated companies in the sense of Article 6 of the Belgian Companies Code (other than the subsidiaries) on the other. The procedure set out in Article 524 must also be followed for decisions or transactions associated with relations between the subsidiaries of the Company and companies associated with the said subsidiaries in the sense of Article 6 of the Belgian Companies Code (other than the subsidiaries of subsidiaries). Such a procedure is not applicable to decisions or transactions which have taken place under the conditions and with the securities that are generally applicable in the market for such transactions, or to the decisions and transactions that represent less than one percent of the consolidated net assets of the Company.

All decisions or transactions to which Article 524 of the Companies Code is applicable, must be subjected to assessment beforehand by a committee of three independent directors, assisted by one or more independent experts. The committee describes the nature of the decision or transaction, the (commercial) advantages or disadvantages to the Company and its shareholders, and the financial consequences of this, and shall determine whether the decision or transaction is of such a nature that it will cause a detriment to the Company which, in the light of the policy being pursued by the Company, is clearly unlawful. The committee shall make a recommendation, stating its reasons in writing, to the board of directors, which will then make a decision in the light of the recommendation from the committee.

The board of directors may deviate from the recommendation of the committee, but if this is done it must state on what grounds it is deviating from the recommendation of the committee. The decision by the committee must, together with an excerpt from the minutes of the board of directors meeting, be printed in the annual report of the Company.



8. Remuneration and benefits received by Directors and the Executive Management

Directors' mandates are not remunerated. Certain directors, however, have received warrants in Ecodis. More specifically, Mr Leon Van Rompay has received 100,000 warrants, while Mr Guido Verswijvel holds directly and indirectly (via his wife Cynthia Verswijvel-Cornelissen) 70,000 warrants in Ecodis. It is possible that in future the mandate of independent director will be remunerated. The decision here lies with the shareholders' meeting.

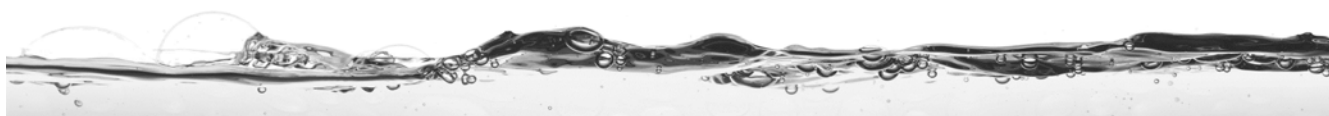
The executive management collectively receives remuneration of EUR 120,000 per annum. No bonus is awarded. The agreements with the executive management may be terminated subject to reasonable terms of notice. There is no particular dismissal settlement.

9. Relations with significant shareholders

A shareholders' agreement exists between the existing shareholders of Ecodis, with the exception of one shareholder who acquired shares in Ecodis on 17 May 2007. On the basis of this agreement, the shareholders have agreed that:

- prior to any shareholders' meeting of Ecodis they will consult among themselves as to how they will vote at the shareholders' meeting;
- they will respect a 365 calendar day lock-up following the Listing Date, whereby from 180 days after the Listing Date they may transfer 10% of the total number of shares held prior to Closing Date (subject to pre-emption rights), and on the understanding that the lock-up does not apply to transfers outside the stock market providing that the transferee respects the lock-up;
- they will respect pre-emption rights and limitations on transfers for three years after the end of the lock-up.

These shareholders are considered to be acting in concert for the duration of this shareholders' agreement.



Chapter V: The activities of Ecodis

1. Business profile

1.1 Company description

Ecodis is a company that specialises in water disinfection using innovative technology based on electrolysis or anodic oxydation.

Ecodis offers an ecological alternative to the existing water disinfection techniques, offering the following advantages:

- No addition of chemicals or salts required to disinfect the water;
- Permanent residual effect after treatment by the *ecodis*[®];
- Decomposition and physical removal of the biofilm in the network of water pipes;
- Integrated software for optimal control and monitoring of the *ecodis*[®] solution.

Due to more awareness of the environment, water problems, the increasing social responsibility of companies and the more stringent environmental regulations (such as European waste legislation REACH²⁴) as well as the high expenses, the business world is being urged to search for alternative methods that use few to no chemical substances.

Ecodis distinguishes itself in the water treatment sector through its innovative technology. Ecodis pays special attention to the pioneering work that is carried out by its Research and Development department and its cooperation with national and international knowledge centres.

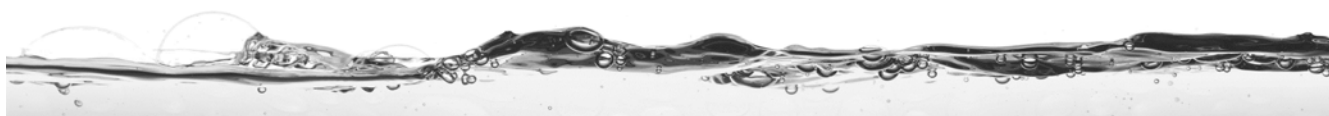
Due to the continuous focus on scientific research, Ecodis has succeeded in developing an innovative water disinfecting technology without the addition of chemicals or salts.

This solution enables sustainable water disinfection at low cost. In addition, Ecodis developed a user-friendly on-line control and monitoring system to ensure the quality of the *ecodis*[®] water from a distance.

Ecodis' strategy entails the development, production, marketing and sale of these applications, and the providing of accompanying services via service contracts and management plans. In certain product groups, Ecodis aims for a service model where the price will be invoiced per m³.

Ecodis has customers in the private and public sector. It mainly focuses on industrial companies, rest and nursing homes, health centres, leisure centres and government services.

²⁴ European regulations regarding Registration, Evaluation and Authorisation of (hazardous) Chemicals, as was finally determined by the European Council of Ministers on 18 December 2006, commencing 1 June 2007. Also see chapter II.2.3.2.



Ecodis has one Dutch subsidiary, Ecodis B.V.

1.2 Company history

Elmar Peters established Ecodis NV on 19 July 2002.

The establishment of the Company was the result of many years' research into the possibilities of disinfection techniques without chemicals or salts. Demand grew for ecological alternatives due to the dangers regarding health and safety (by-products) by using chemicals; increasingly stringent environmental standards and the resulting expenses.

Elmar Peters started with the development of the first *ecodis*[®] cell in October 1997.

A year later, the first tests were already carried in collaboration with the Antwerp drinking water company PIDPA in Grobbendonk (Belgium). Researchers at the Catholic University of Leuven (Belgium) investigated several possible applications of the *ecodis*[®] cell.

In 1999, in cooperation with Samenwerking Vlaams Water ("SVW", Flemish water Co-operation), the federation grouping all drinking water companies in Flanders, the research concentrated on the disinfecting strength of the *ecodis*[®] cell. Internationally renowned laboratory Derva in Heusden-Zolder (Belgium) carried out the first tests in private swimming pools.

From 2000 and for four years, SVW conducted specific research into the effect of the *ecodis*[®] cell on the biofilm in water pipes and compared the results to those of the best technology available at that time, namely chlorination of drinking water.

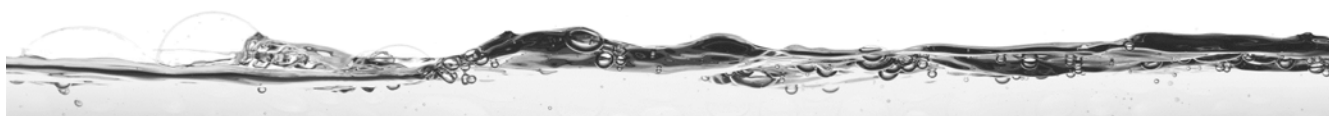
The results of the above-mentioned (and other) research are dealt with in Section 3.10.2.

In October of that same year, Elmar Peters was honourably nominated for the prestigious Aquatech Innovation Award, after a panel of international experts had chosen Ecodis as one of the most promising technological revelations of the Aquatech fair.

Ecodis NV was established in 2002 and the first employees were recruited. Currently, the Company employs a multidisciplinary team of about 20 engineers/scientists and technicians. Several research projects have been set up or extended in a variety of universities and knowledge centres.

At the end of 2003, Ecodis decided to develop its own electronic micro-controller to make it possible to monitor the disinfection process at a distance on-line.

The first patent application was submitted in 2005. In addition, the first version of the '*on-line monitoring and microprocessor*' was completed. In the same year various peer-reviewed articles were published about the *ecodis*[®] technology in several internationally reputed scientific journals. Contracts were concluded in various sectors to test the Ecodis technology in practice and to integrate the results and experience into the soft- and hardware of the microprocessor.



In February 2006, the Company relocated to Schoten, a district of Antwerp. Ecodis moved into a spacious industrial building housing an auditorium, a water laboratory and a large production hall. Moreover, the team was much expanded. In the same year, Ecodis also organised its first in-house symposium and a Dutch subsidiary company was founded.

In March 2007, Ecodis was the first company to receive a conditional temporary certification (“declaration of no objection”) from the Dutch Government to place its installations in the Netherlands.

2. Market

2.1 The overall water industry

2.1.1. The importance of water

Water is essential. There are three main convincing conclusions for this:

- To have enough usable water is an essential condition for all life forms and therefore for the preservation and improvement of our standard of living;
- The usable and available water on earth (estimated at approx. 35 million km³ or 2.5% of all water) is limited and is decreasing due to pollution and climate change; and
- Water is irreplaceable.

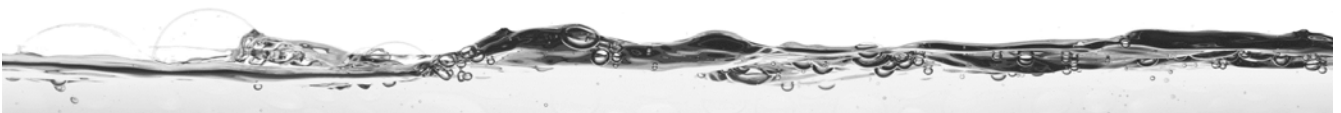
Being able to continually ensure the availability of enough pure and safe water is therefore one of the main existential challenges and objectives, presupposed by numerous leading national and international institutions and governments, such as the United Nations²⁵.

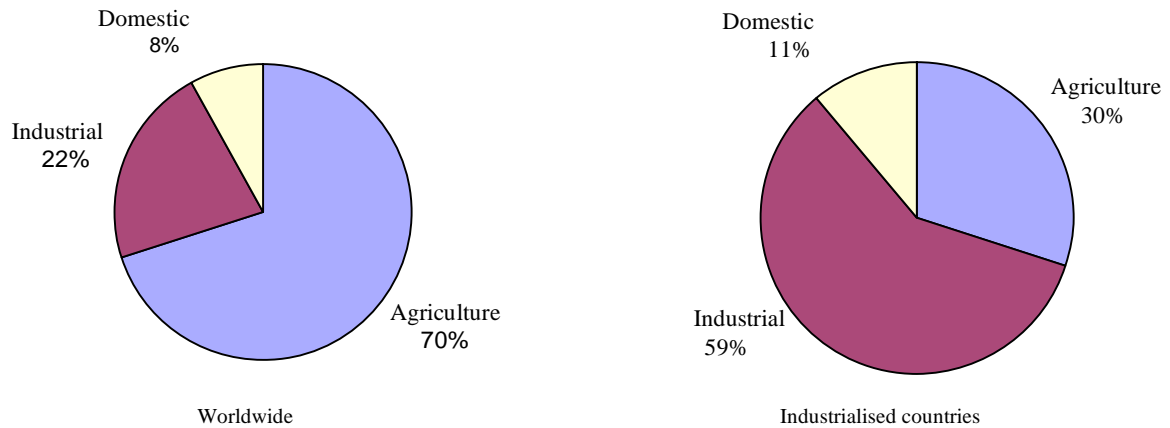
Water therefore also has, in addition to its evident social and political importance, considerable economic importance. The water industry indeed offers immense market possibilities for companies and investors.

2.1.2. Description

97.5% of the water on earth consists of salt water. Of the remaining 2.5% freshwater, less than 1% is available for human consumption, as most of this consists of polar ice. Worldwide, about 4.5 million km³ of water is used for human activities annually. This consists of three main consumption categories: agricultural, industrial and domestic use. Worldwide, agriculture is responsible for the main use, but this strongly differs from region to region.

²⁵ Based on its first World Water Development Report “Water for People, Water for Life”, the United Nations accepted resolution A/RES/58/217 where the 2005 – 2015 period was declared the International Decade for Action, “Water for Life” and focuses on achieving various water-related objectives included in Agenda 21, the UN Millennium Development Goals and the Johannesburg Plan of Implementation.





The water sector is not a clearly defined market. It is strongly fragmented and changes rapidly (consolidating).

The sector groups an extremely diverse group of public and private companies such as: drinking water companies, wastewater businesses, the suppliers of products, systems and services, sector organisations, professional associations, public bodies and educational and research institutes, whose only common characteristic is that their activities are partly or fully related to water.

The study “Socio-economic importance of the water sector in Flanders” divides the Flemish market water sector in the narrow sense (production and distribution of drinking water and collecting and processing of wastewater) and in the broad sense (suppliers such as infrastructure contractors, consultants and technology suppliers). The economic relation between these categories in Flanders is indicated below²⁶:

		Turnover (based on 2004 figures)
Narrow sense	Drinking water	EUR 559 million
	Wastewater	EUR 338 million
Broad sense		EUR 2.7 billion
Total sector		EUR 3.6 billion

²⁶ For an overview of the Flemish water sector see: David Keirseblick B Sc and Prof. Dr. Xavier Gellynck, University of Ghent, faculty of Bioengineering Sciences, February 2006. Study for the TNAV: “Socioeconomic importance of the water sector in Flanders” (hereafter also referred to as “Flemish Water Sector Study”).



The following division was postulated with regard to the US market:

Segment	2004 turnover (in USD billion)	Expected growth '05-'07
Water treatment equipment	8.51	6 - 7%
Distribution equipment	11.19	3 - 4%
Chemicals	3.88	2 - 3%
Contract Operations	2.24	6 - 10%
Consulting/Engineering	7.09	5 - 7%
Maintenance	1.71	3 - 5%
Instruments and testing	1.34	4 - 6%
Wastewater utilities	32.57	4 - 5%
Drinking water utilities	33.79	3 - 4%
Total U.S. Water Industry	102.33	4 - 6%

Source: Environmental Business Journal, 2005

2.1.3. Size

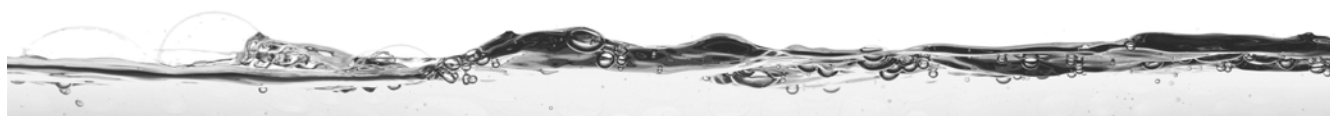
Although the estimates differ per source, it is generally believed that the worldwide water sector is a stable and major growth market with an estimated value of several hundred billion USD. Due to the difficulty of defining the sector, as well as the lack of correct and complete market information, correctly determining the size of the worldwide water market is of course impossible so all estimates and market studies are approximated.

In general, the worldwide water market is estimated at approx. 300- 400 billion USD annually, with average historic and stable long-term growth of minimum 5 to 6 % annually²⁷.

According to a German marketing agency the world market for water and wastewater will grow from 303.1 billion USD in 2005 to 540.7 billion USD in 2015²⁸. This is a growth of almost 80% in 10 years. This does not take into account the rapid growth of the bottled water market. This market segment is estimated at approximately 25 billion USD in 2004 and 85 billion USD in 2015.

²⁷ SAM Sustainable Asset Management, January 2006. Research study: "Precious Bleu -Investment Opportunities in the Water Sector" (hereinafter also referred to as "SAM Rapport").

²⁸ Helmut Kaiser Consultancy, February 2005. Report: "Water Disinfection, treatment and purification (water quality securing) 2004-2005-2010-2015" (hereinafter also referred to as "Kaiser Report").



***World markets for Water and Water treatment 2002-2010-2015
(In billion USD)***

	2002	2003	2004	2005	2006	2010	2015
Western Europe	122.5	125.5	130.9	137.3	143.3	162.0	188.0
Eastern Europe	7.5	8.7	9.2	9.7	10.6	19.5	27.4
Asia (excl. China)	12.4	15.4	17.4	20.2	21.8	50.9	92.3
China	5.4	7.6	8.0	8.4	9.2	13.8	25
US/Canada	79.5	83.9	88.3	92.2	101.5	118.5	140.6
South America	21.0	21.6	22.7	24.0	24.8	28.5	35.6
Africa	3.6	4.1	4.3	4.9	5.2	10.1	20.8
Other	5.4	6.0	6.2	6.3	6.5	9.1	11
TOTAL	257.3	272.8	287.0	303.1	322.9	412.4	540.7

Source: Kaiser Report²⁹

The European water and wastewater market was estimated at approximately 147 billion USD annually in 2005.

According to a recent study carried out by the University of Ghent for TNAV, the overall water sector in Flanders is estimated at approximately 3.37 billion EUR annually. Employment represents approximately 17,000 people³⁰. The water sector is therefore one of the most important economic sectors in Flanders.

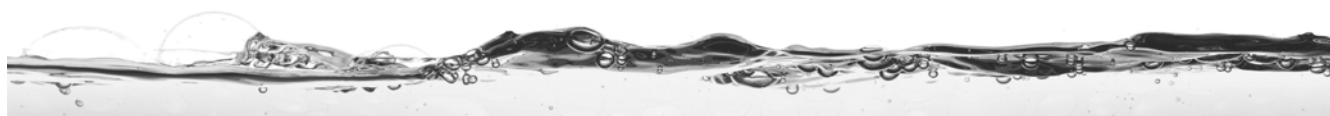
2.1.4. Critical market factors

Water was traditionally considered as public property, abundantly present and without a notable cost price. Gradually people are realising that this will change and that water can develop into a strategic asset.

More specifically, several critical market factors, discussed below, will determine the further development and growth of the water industry.

²⁹ This report can only be purchased and hence cannot be consulted (in full) on-line. The Helmut Kaiser Consultancy website is: www.hkc.com.

³⁰ Study Flemish Water Sector.

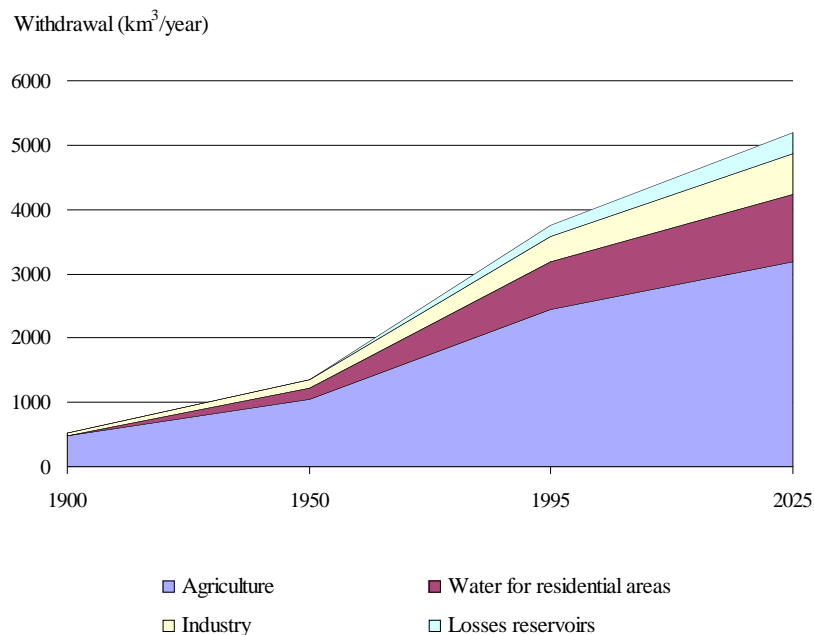


2.1.4.1. Increasing “water crisis”³¹

- The problem

Various “alarming” studies of international organisations, such as the United Nations, the World Health Organisation (WHO) and the World Wildlife Fund (WWF) indicate that we are being confronted by water shortage that will further increase worldwide. This can be defined as the moment the impact of users on the amount and quality of the available water is such that the demand of not every sector can be met.

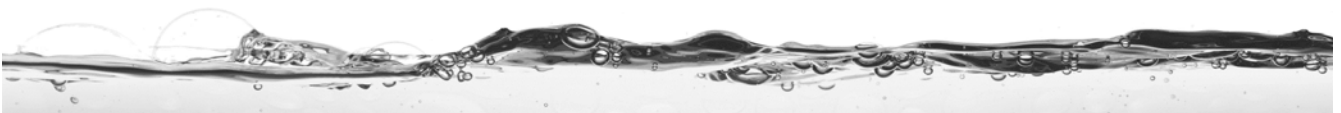
Both supply and demand indicate tendencies that strengthen this concern. As indicated in the graph below, water use is increasing by approximately 2.5% annually and clearly exceeds the population growth, which is mainly caused by the worldwide industrial expansion.



Moreover, the quality as well as quantity of the water supply is undergoing increasing pressure. Tendencies such as further urbanisation and therefore concentration of the population ensure exhaustion of the local water supply. Climate change³² further increases this trend. The insufficient or outdated water infrastructure sometimes leads to great losses, for example through leaks, forms major

³¹ For a general overview of the water problem see: studies of the United Nations under footnote 3 or Robin Clarcke and Jannet King, 2004. The Water Atlas

³² For Europe also see: European Environment Agency, 2007. Report: “Climate change and water adaptation issues”. Also see chapter 2.2.3.2.

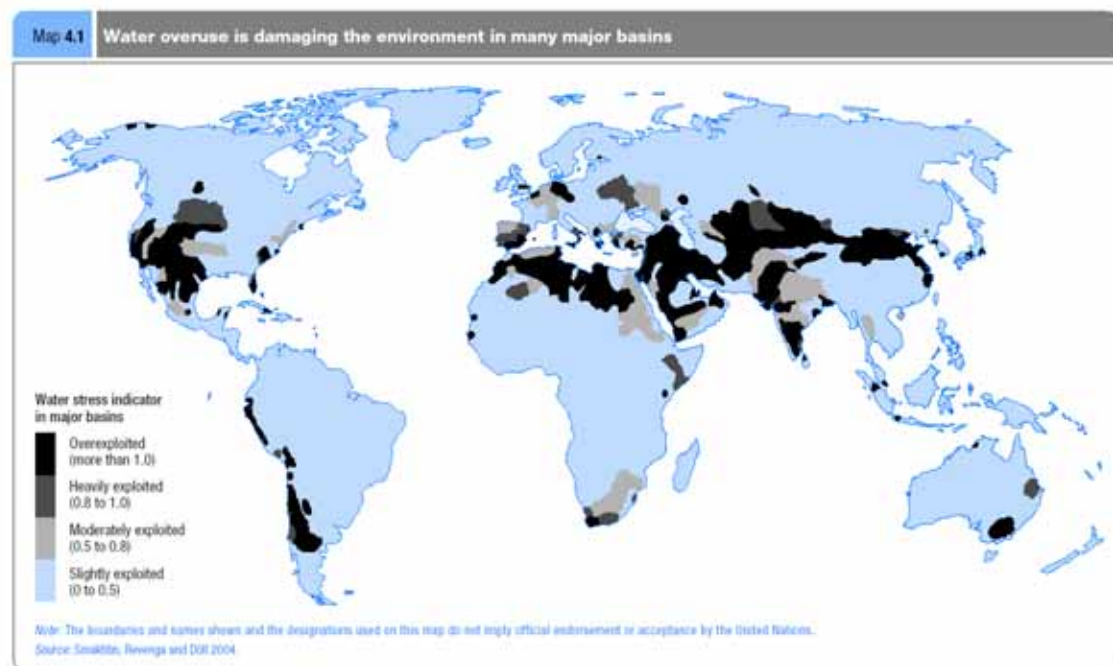


bottlenecks and can have a negative impact on water quality. Further worldwide economic growth and increasing wealth and comfort demands lead to new forms of industrial water pollution and new disease-causing germs (such as the *Legionella* bacterium), with a major impact on the water quality. Finally, (waste) water is used excessively, rashly and inefficiently.

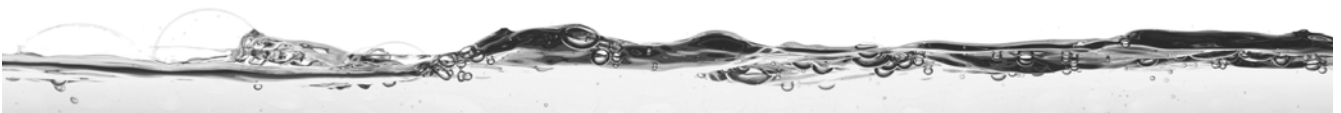
- Some findings

In 2050 the worldwide demand for water will have doubled and approximately half of the total world population of 8 billion people will struggle with chronic water shortage. An estimated 1.2 billion people currently have no access to clean drinking water and approximately 2.5 billion people do not have or have insufficient access to sanitary facilities. Contaminated water kills about 1.7 million people annually and 2.2 million people suffer from an illness caused by contaminated water. Every eight seconds a child dies because of contaminated water.

A report drawn up by the World Wildlife Fund (WWF)³³ indicates that the water crisis does not only affect the poorest regions. The crisis has a worldwide character. The WWF points out the dangers of climate change for Europe, the periods of drought and the loss of wildlife areas that store water (wetlands). The organisation also condemns the mismanagement of freshwater sources, permanent serious (ground) water pollution and the excessive use of water by industry and agriculture. Large urban areas also use too much water.



³³ World Wildlife Fund, August 2006. Report: “Rich countries, Poor water”.



2.1.4.2. Increasing public awareness and attention

Partly due to the increasing media attention for the water crisis and numerous water incidents, public awareness and concerns for environmental and health issues regarding water is increasing. The wishes and perceptions of the consumers and users will have to be taken into account more and more.

Apart from the discovery of new forms of water pollution that is harmful to man, this increasing awareness is also associated with the better stream of information to the public and the consumer. This fact, combined with increased market power of the consumer and the importance of a good reputation, urges companies and institutions to profile themselves as eco-friendly users of water, as well as players who use safe water in their activity. For example, there is an ISO 14001 certification examining ecological performance.

2.1.4.3. Increasing regulation and inspection

Growing public awareness leads to stricter public supervision and stricter specific water legislation. This naturally has an enormous impact on the further growth and development of the water sector. It is believed that fear of new terrorist attacks and the vulnerability of most water distribution systems will result in further legislation.

The European Union already has extensive water regulation³⁴. The European Water Framework Directive (2000/60/EG) of 2000, as well as the REACH regulations will have a major influence on better purification of European Union wastewater and on the market development in the new member states of Central and Eastern Europe. The phased implementation of this regulation and conversion into legislation of the European member states will have a considerable influence on the further development of the European water market.

2.1.4.4. Need for considerable investments

Numerous studies indicate that enormous investments are needed for the upkeep, renovation and adaptation of the current (often outdated) water infrastructure, as well as for the necessary new water infrastructure. Major investments will be necessary for the distribution, treatment and purification of domestic and industrial wastewater.

The annual investments required are estimated at 180 billion USD. The investments for the implementation of the European legislation are estimated at 170-230 billion EUR³⁵. According to

³⁴ For an overview of European water legislation also see: European Community, Environment Directorate-General, 2000. Brochure: "The EU policy: clean water".

³⁵ SAM Report.



conservative estimates, water investments for the US for the following 20 years come to at least USD 277 billion³⁶.

In view of the huge cost price and the pressure on cities, technological solutions can be chosen that take on the renovation and construction problem in a different way or make them superfluous. These could be innovative methods to increase the economic life of the infrastructure and decentralised purification and disinfection systems.

2.1.5. Impact of the water crisis on the market

The above market factors will draw the attention of the public, companies and governments to water in a more conscious and economic way. This change of mentality will be increased by confronting the water user with the actual cost of his water use and thus motivate him to invest in economy measures, such as more efficient (re)use and recycling.

This will result in several notable trends and developments in the water industry.

2.1.5.1. Further liberalisation of the water distribution sector

Despite social and political objections it is expected that, due to the enormous investments, the mainly public water distribution sector will be further liberalised, which will result in even more public-private cooperation possibilities.

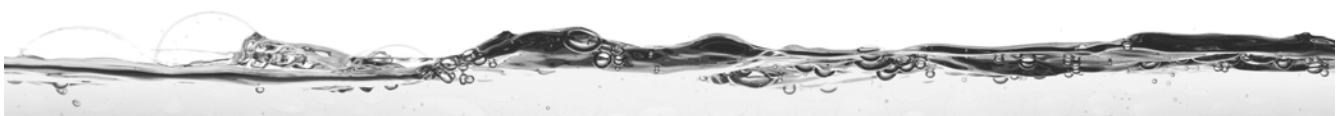
Due to the increasing importance of the private sector, market relations will presumably change considerably and there will be more market-conform competition³⁷. It can be expected that, because of privatisation, the former public enterprises will want to make major efforts with regard to service to their customers by assisting them in their water management.

In 2000 only 10% of worldwide water management was private, but this percentage is expected to increase significantly in the future.

It can be expected that the government will claim a major role despite this privatisation through safety regulations and price-fixing.

³⁶ Steve Maxwell, The Environmental Benchmark and Strategist, 2006. Article: "State of the Water Industry 2006 Who Will Pay? Who Will Profit?"

³⁷ Study Flemish Water Sector



2.1.5.2. Company outsourcing trend with regard to internal water problems

There is also an increasing outsourcing tendency of industrial companies (including food and pharmaceutical companies) for the purification of wastewater. Due to the increasing complexity of water management (e.g. regulations) and increasing consumer pressure, companies are being motivated to outsource their internal water management to specialised companies.

2.1.5.3. Increasing technological innovative solutions

Although the water sector is a rather conservative and non-innovative market, more and more innovative technological solutions are being applied, such as:

- Permanent infrastructure techniques (agricultural irrigation systems, water transport systems, etc.);
- Water purification with membrane technology;
- Desalination or desalting of salty and brackish water;
- Alternative water disinfection technologies;
- Monitoring systems to examine performances;
- Etc.

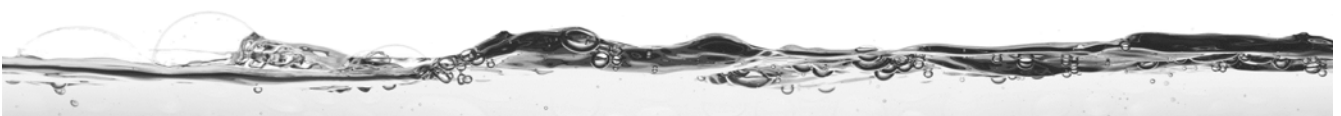
There is increasing interest in systems with extra protection, decentralised and as close as possible to final use ("*point of use/point of entry*"). These offer the user more certainty regarding water quality. The perception of the fact that drinking tap water is not safe, tasty or healthy, whether right or wrong, is probably one of the reasons for this success.

2.1.5.4. Further consolidation and (re)positioning³⁸

It is expected that the intense (international) merger and acquisition activity in the water sector will continue.

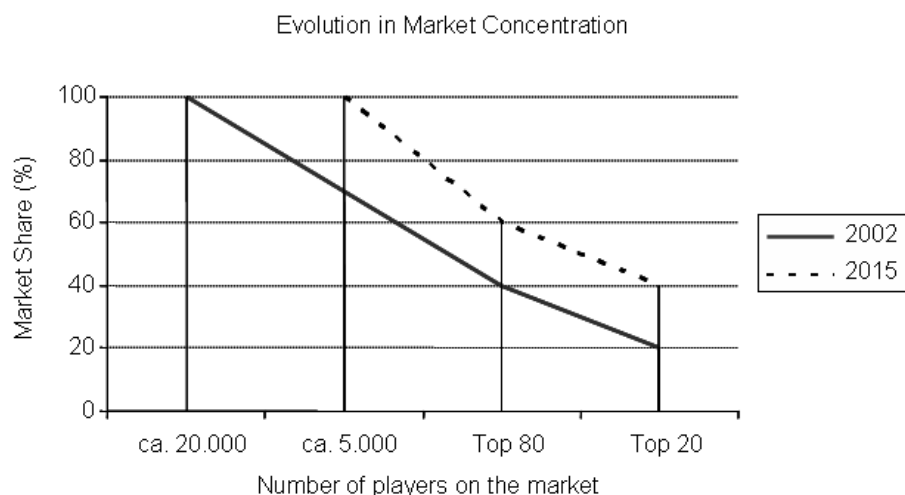
What is notable here is that an increasing amount of large groups such as Veolia, Suez, RWE, GE Water, ITT Industries, Siemens, General Electric, Danaher and 3M Corporation are (re)positioning themselves strategically inside or outside the water sector. Apart from the favourable market perspectives of the water sector, this tendency is also prompted by the typical advantages of scaling-up, the need to offer an overall solution as well as the fact that growth possibilities via drinking water distribution alone are too limited. What is also remarkable is that several of these larger diversified

³⁸ For an overview of recent transactions also see: article by Steve Maxwell mentioned under footnote 13.



players often take over certain technological niche players in rapidly growing sectors (such as water treatment and water purification) to develop into global diversified water companies.

It is assumed that the currently fragmented world water market of approximately 20,000 companies will consolidate further to just 5,000 in 2015. It is estimated that by about 2015, the current market share of the 20 largest players will double to 40%³⁹.



Source: Kaiser Study

2.1.5.5. Increasing investment interest

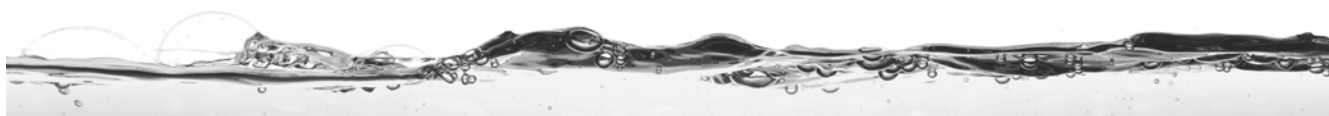
The apparent strong and consistent long-term growth perspectives of the water sector attract many investors.

An increasing amount of ecological, ethical and even specific water funds are focusing on investments in the water sector⁴⁰. The recent increasing interest of (often larger) (“*cleantech*”) private equity/venture capital players (especially in rapidly growing sub sectors) is also remarkable. They are presumably also attracted by the consolidation opportunities in the fragmented water market⁴¹.

³⁹ Kaiser Study.

⁴⁰ Including SAM Sustainable Water Fund, Pictet Funds, Maxx Water Funds, Atlantis Water Fund LP, ASN Milieu en Water Fonds, KBC ECO Water Fonds, Acqua International Partners, LP (Texas Pacific Group), etc.

⁴¹ For an overview also see the article by Steve Maxwell mentioned under footnote 33.



2.1.6. Possible consequences and opportunities

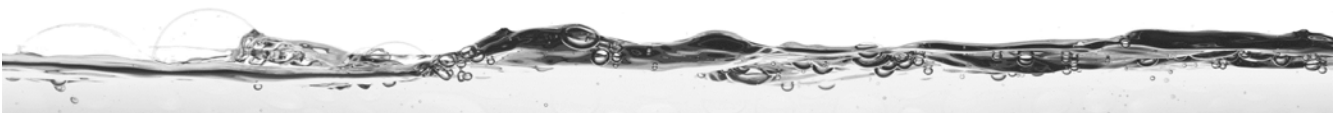
In view of these findings and trends, there is the general belief that the costs of the water sector will increasingly represent a larger share of the Gross National Product. They will in the long run inevitably give cause for a (further) increase of the water price, which is still relatively low in most Western countries. As the water price increases, the above market tendencies will further intensify.

The worldwide water sector is experiencing a crisis and is being confronted by various complex social, political and economic challenges to be able to guarantee the availability of enough safe and clean water in the future. But this crisis simultaneously offers enormous growth possibilities for creative, innovative and well-managed companies and, *a fortiori*, investors.

The investment clusters below should offer very good (growth) perspectives⁴²:

- Water distribution and water management: construction and management of water infrastructure, water transport systems, public/private cooperation;
- Innovative water treatment: (waste) water purification, water disinfection and desalinating;
- Consumer systems for recycling, water efficiency and reuse;
- Water and food: food production, agricultural irrigation systems, bottled water.

⁴² amongst others the SAM Report.



Status of the global water industry in a nutshell

Driving market factors:

- Increasing water crisis: serious water shortage and water pollution problems
- Growing public awareness and attention for water issues
- Increasing water regulation and stricter government control
- Necessity for considerable water infrastructure investments

Presumed unavoidable consequence:

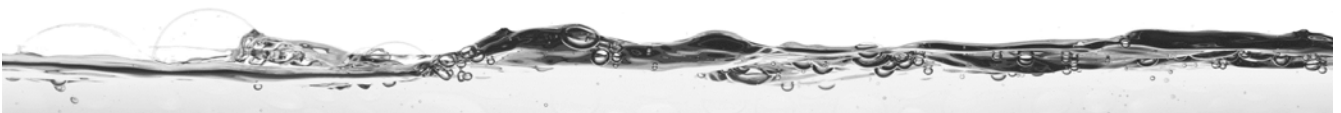
- Growing awareness of the economic cost of water
- The water (cost) price will have to increase in the long run
- More efficient (re)use and recycling of water

Impact of the water crisis on the market scope and structure:

- Further liberalisation and privatisation of the water (distribution) sector
- Outsourcing trend of internal water problems of companies
- Increasing technological and innovative solutions and techniques
- Continuous consolidation and (re)positioning
- Increasing investor interest

Favourable investment clusters:

- Water distribution and water management
- Innovative water treatment including water disinfection
- Efficient consumer systems
- Food and bottled water



2.2 Water disinfection market⁴³

2.2.1. Introduction

Disinfection is a process that kills and inactivates (pathogenic) micro-organisms in water.

Disinfection can be applied to various types of water such as drinking water, various types of (pre-treated) industrial (waste) water, process water, cooling water, swimming pool water, etc. The degree of complexity and the extent of necessary disinfection is of course different depending on the type, use and quality of contamination of the water to be disinfected. Disinfection can be done as an end treatment centrally (i.e. before distribution via the network of pipes) and/or decentralised (“*point-of-use*”).

Apart from conventional disinfection with chlorine, an increasing amount of new alternative methods and technologies are available (as will be explained below). This new trend results from ecologic, economic and health considerations as well as the more stringent legislation.

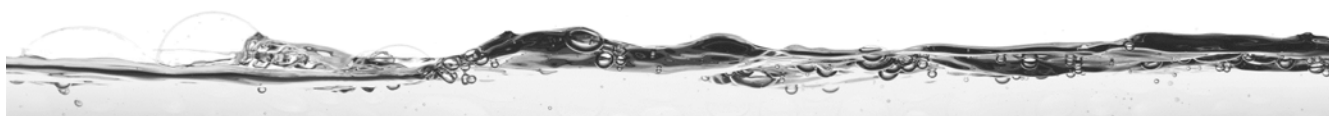
2.2.2. Size

The worldwide water disinfection market in the broad sense in 2004 is estimated at 5.31 billion USD and this market is expected to grow to USD 9.20 billion in 2015⁴⁴.

The disinfection market is generally considered as a stable growth market with an expected average annual growth of approximately 10–15% (and, depending on the sub sector and the region, even up to 25%). The expected growth in mature markets, such as Western Europe and North America is evidently more moderate than those in Asia, Africa and South America.

⁴³ Main sources: Kaiser Study; Sam Report; and Frost & Sullivan, February 2007. Market Insight “Disinfection: Still Growing After a Century of Providing Safe Water”, and Frost & Sullivan, April 2007, Report: European Water and Wastewater Disinfection Systems Markets (hereinafter “Frost & Sullivan Study”). Apparently, in these studies little attention is paid to new and unknown technologies, as well as market possibilities for decentralised solutions.

⁴⁴ Kaiser Study.



Total Market for disinfection in water treatment in 2004-2010-2015 (per region)

(in USD billion)	2004	2005	2006	2010	2015
Western Europe	1.55	1.63	1.83	2.22	2.52
Eastern Europe	0.48	0.51	0.58	0.71	0.82
USA/NAFTA	1.53	1.62	1.83	2.22	2.54
Asia	1.30	1.41	1.66	2.13	2.54
South America	0.23	0.24	0.28	0.33	0.39
Others	0.22	0.23	0.27	0.33	0.39
<i>Total</i>	<i>5.31</i>	<i>5.64</i>	<i>6.45</i>	<i>7.94</i>	<i>9.20</i>

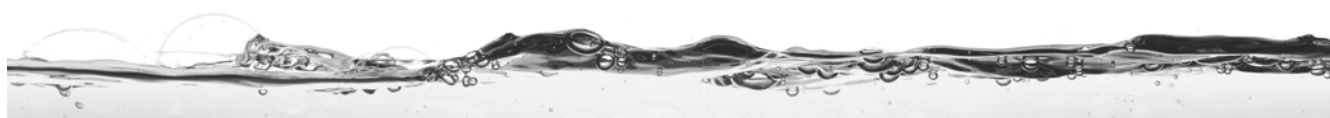
Source: Kaiser Study

The European water disinfection market in the broad sense in 2004 is estimated at just over USD 2 billion and USD 3.34 billion in 2015. According to a recent market study the European market share for water and wastewater disinfection systems (the disinfection materials market only without taking account of other related investments, such as infrastructure investments or products) in 2006 is estimated at USD 485.5 million with a 40% market share for domestic drinking water, 12% for domestic wastewater and 48% for industrial water (the main sectors being food & beverage, semiconductors and the pharmaceutical industry). With an average annual growth of 6.5% this market segment is estimated at USD 753.2 million in 2013, with a higher growth rhythm in Central and Eastern Europe and a growing market share for newer technologies.⁴⁵

On the basis of a segmentation of the market according to the disinfection method⁴⁶, there is a notable development: traditional chlorine-based (and other traditional chemical) and thermal (physical) disinfection techniques will grow significantly slower. They will also gradually lose market share to new technological procedures (such as ultraviolet and electrolysis).

⁴⁵ Frost & Sullivan Study

⁴⁶ Kaiser Study



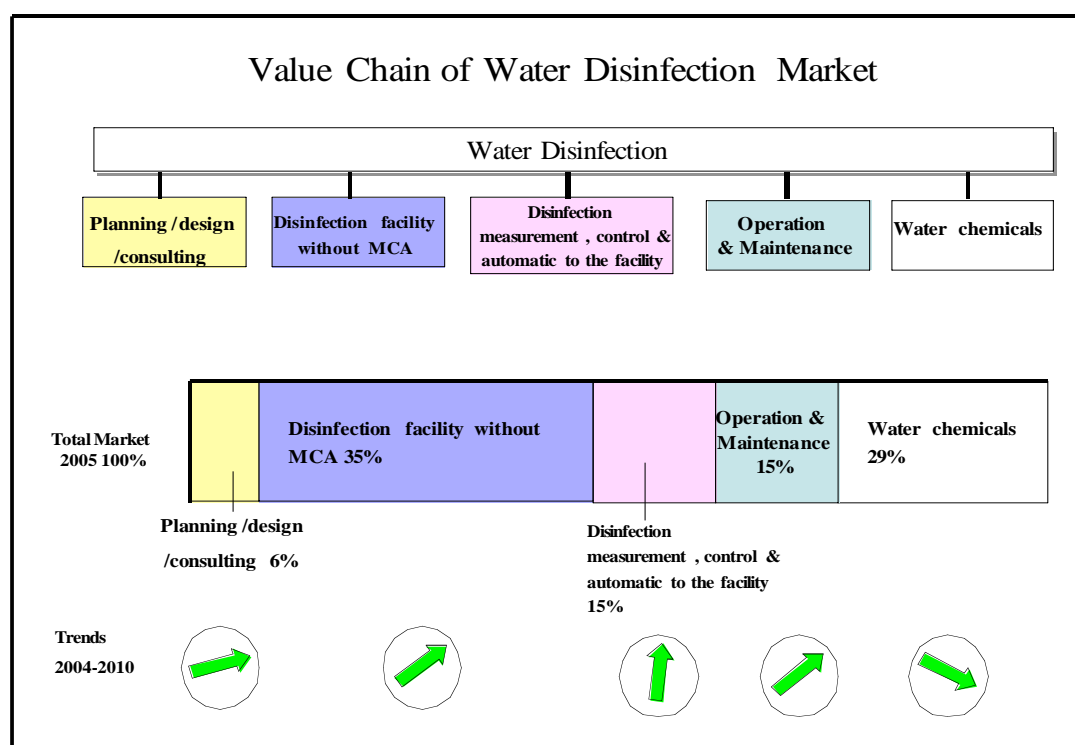
World disinfection market (per disinfection method)

(in USD billion)	2004	2010	2015
Chlorine based	1.26	1.48	1.56
Ultraviolet	1.44	2.53	3.04
Ozone	0.86	1.06	1.22
Thermal	0.57	0.70	0.74
Other (including electrolysis)	1.18	2.17	2.64
Total	5.31	7.94	9.20

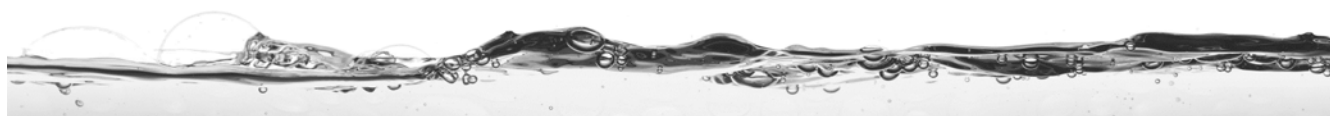
Source: Kaiser Study

When dividing the market according to the value chain, it appears that the development of disinfection facilities (with a market share of over 35% in 2004) is the most important market segment. This market share will continue to grow in the coming years. The share (15% in 2004) of services with added value such as (on-line) monitoring, control, analysis and measurement, are expected to grow a lot while the share of water treatment chemicals is expected to drop.

Value chain of world disinfection market



Source: Kaiser Study



2.2.3. Specific market factors, tendencies and points for attention

2.2.3.1. Global market tendencies

The further expected growth of the water disinfection market is, as previously indicated, mainly driven by widespread and increasing water pollution and the desire to combat the baleful humanitarian consequences of water contamination. In more developed regions such as Europe and North America, the consumer and industry demand for pure, safe, aesthetic, tasty (odourless, chlorine-free) and healthy water will continue to stimulate the market growth.

New and more stubborn types of industrial and bacterial water contamination (such as the *Legionella* bacteria, biofilm contamination, *Escherichia coli* and *Cryptosporidium*) that cannot or not effectively be combated with traditional disinfection methods are expected to require newer and increasingly effective technological solutions.

In Europe and North America in particular, chlorine-based and other chemical disinfection methods, as well as thermal disinfection, will have to be increasingly replaced by other more sustainable, efficient and ecological disinfection methods such as ultraviolet and electrolysis.

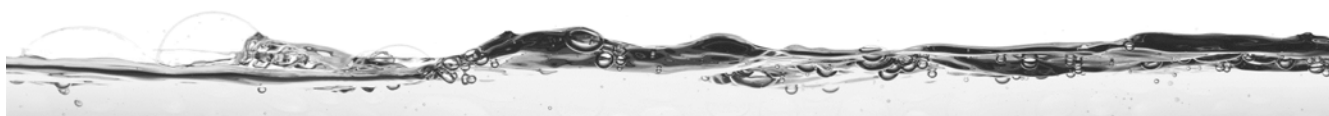
Major multinational players such as ITT, Siemens, Danaher, GE Water and 3M respond to this tendency by acquiring these innovative technologies via partnerships or takeovers of smaller innovative market players such as Wedeco (Germany), Trojan Technologies (Canada), Aquafine (US), Ionics (US), Zenon (Canada) and Cuno (US). This consolidation wave is expected to continue.

Apart from the growth possibilities in the new European Union countries in Central and Eastern Europe (phased implementation of the European water legislation) the necessary replacement investments of outdated systems in Western Europe will also support market growth⁴⁷. The tendency towards more efficient decentralised “point-of-use” water purification solutions (membrane technology) and disinfection offer extra (and most probably not fully recognised) growth possibilities. Cost as well as safety considerations against possible terrorist attacks on central water distribution systems also play a part here.

Due to the presence of several larger global players and the choice between various competing disinfection technologies, relatively intense competition is expected. In this regard it is important for smaller niche players (like Ecodis) to distinguish themselves by continually innovating and investing in research and by offering complementary services with added value such as on-line monitoring, steering, analysis and measurement, telemetry, engineering, maintenance, training, coaching of management plans, etc.⁴⁸

⁴⁷ Frost & Sullivan Study.

⁴⁸ *Ibidem*.



2.2.3.2. Increasing national and supranational legislation

A more stringent legislation and increased public monitoring are naturally the most evident driving market factors. As indicated previously, the implementation of this legislation in Western countries will give rise to considerable investments in the water sector in the next few decades. Below is an overview of national and supranational legislation in several relevant areas. Although not indicated below, legislation in other Western countries is similar to the European.

- **European water legislation**

The European Union has an extensive water legislation⁴⁹. European efforts to improve water quality can be divided into three phases.

The first European water legislation phase commenced in 1975 with the Surface Water Directive (75/440/EEC) and culminated in 1980 in the Drinking Water Directive (80/778/EEC). Legislation was mainly focused on obtaining water quality objectives for specific types and uses of water: fishing water, shellfish water, swimming water and groundwater.

The European water legislation was evaluated in 1988, which led to new important directives concerning the treatment of urban wastewater (91/271/EEC) and nitrates (91/676/EEC) in 1991.

The third phase started in 1995 and resulted in the 2000 coordinating **Water Framework Directive** (2000/60/EC) (“WFD”) that should help form the future European water policy.

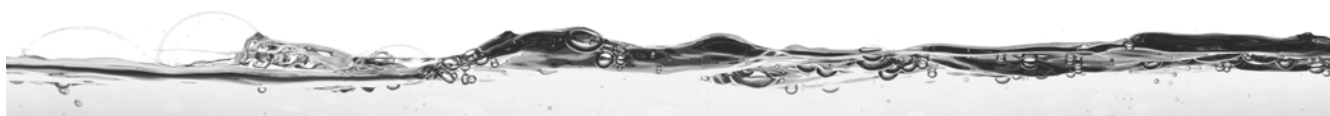
The aim of the WFD is to determine a framework for the protection of land surface water, transitional water, coastal water and groundwater. The directive wants to safeguard water supplies and the quality of basins in Europe in the long run. This directive will need to contribute to a progressive decrease of dumping dangerous substances in the water. The objectives need to have been met by 2015. The phased implementation of these regulations and the change in the legislations of European member states will have a considerable influence on the further development of the European water market⁵⁰ and will require major investments.

The most relevant other European regulations regarding water are briefly discussed below.

The **Dangerous Substances Directive** (76/464/EEC) is one of the main parts of the European environmental legislation. The directive creates a framework for the approach of water pollution by a

⁴⁹ For an overview of the European water legislation also see: European Community, Environment Directorate-General, 2000. Brochure: “The EU policy: pure water”.

⁵⁰ The conversion of the European WFD into Flemish legislation was enacted by the Decree concerning Integral Waterpolicy of 18 July 2003 that determines the legal and organisational framework for the future water policy in Flanders. As it is a framework decree it only determines the major policy guidelines for which further legislation is required.



large amount of dangerous substances that have been included in an extensive list. The directive obliges the member states to establish programmes that drive back pollution, for which binding water quality objectives and a system of dumping licences are used. The Commission has brought cases against several member states before the Court of Justice of the European Communities, because these countries do not comply with the directive.

The **Nitrate Directive** (91/676/EEC) focuses on preventing too high nitrate concentrations caused by fertilisers and agricultural dumping in surface water and ground water. Too high nitrate concentrations result in unwanted ecological changes in the water, and promote the growth of harmful algae. These concentrations are also harmful to public health. The directive obliges member states to check surface water and groundwater, to identify water that has been polluted by nitrate and to indicate the vulnerable areas (for example, areas with intensive agriculture that include nitrate polluted water). This obligation had to be met by December 1993.

Directive regarding the treatment of urban wastewater (91/271/EEC) is aimed at the approach of pollution caused by nutrients, bacteria and viruses caused by the dumping of urban wastewater. By dumping urban wastewater, very high concentrations of nutrients (particularly phosphor and nitrates) end up in rivers and seas, resulting in water "eutrophication". Eutrophication is caused by a major increase of photosynthesising organisms whereby the richness of the types of biodiversity of the water seriously decreases. This is due to a drop of the oxygen level in the water and other ecological activities. The end result is a disturbance of the ecological balance in the water and a decrease of water quality. This can seriously change the ecosystem of a lake or sea. This process can even lead to massive fish mortality. The potentially harmful bacteria and viruses in the dumped substances can also cause danger to public health in water that is used for recreational purposes or aquaculture. Under the directive cities, urban areas and other population centres must meet minimum norms regarding the collection and treatment of wastewater, within deadlines established by the directive. These deadlines ended at the end of 1998, 2000 and 2005, depending on the sensitivity of the receiving water and the size of the population centres involved.

The **Drinking Water Directive** (98/83/EEC) lays down quality norms for drinking water and is an important instrument for public health. The norms concern a series of substances, characteristics and organisms (parameters). The directive imposes strict requirements regarding microbiological parameters from the point of view of public health implications. Tap water must meet 48 quality criteria on a European level.

The **Bathing Water Directive** (76/160/EEC) is also of importance to public health. According to the directive, swimming water must meet a minimum amount of quality criteria. Binding and rather stringent European norms have been established for several important parameters (such as indicators for the presence of faecal bacteria). The directive obliges the member states to regularly check the water quality and to report this to the Commission annually. These norms had to be met by 1995.



Moreover, the future possibilities of companies to use chemical substances in their production processes will be regulated more stringently. Particularly the phased introduction from 1 June 2007 of the new European chemical substances regulation **REACH** (“Registration, Evaluation and Authorisation of Chemical substances”), as finally adopted by the European Council of Ministers on 18 December 2006, will have considerable impact for the benefit of non-chemical water treatment techniques.

The REACH legislation is necessary because currently little to nothing is known about the possible negative effects on man and nature of the majority of many tens of thousands of substances on the market. This lack of knowledge results in insecurity about the quality and safety of the living and work environment. With the introduction of REACH, companies must map out the risks of these substances on the basis of information about the characteristics, use and exposure to the substances in question. If necessary, they need to take safety measures themselves and recommend these to their buyers. A ban will be introduced for the most alarming chemical substances, where the European Union can grant authorisations and use for products under strict conditions. With the introduction of REACH, the responsibility of an adequate risk management of chemical substances shifts towards the business community.

- ***Legionella pneumophila* legislation**

Legionella pneumophila and Legionnaires’ Disease

Legionella pneumophila is the collective name for a group of bacteria of which several types are capable of making people ill. In some cases the illness results in death. In 1980 it turned out that the *Legionella pneumophila* bacteria that were discovered several years earlier as causers of the so-called Legionnaires’ Disease, could also multiply in tap water installations. *Legionella pneumophila* is the most frequent type found in tap water installations, of which serogroup 1 is the main causer of the Legionnaires’ Disease.

Legionella pneumophila bacteria are agile and bar-shaped, have a length of 2 to 20 micron and a diameter of 0.3 to 0.9 micron. These bacteria live in water and need oxygen. They mainly multiply in biofilms. Major factors for the growth of the *Legionella pneumophila* bacteria are long-term standstill of water (more than two days) at a temperature of 20°C to 50°C, with an optimum between 30°C and 40°C.

Breathing in very small drops of water, the so-called aerosols (5 to 6 micron) that contain *Legionella pneumophila* bacteria can cause light to serious pneumonia, called Legionnaires’ disease. If these bacteria get the chance to enter the intestine and brain via the lungs, this can lead to death. Certain



subgroups of the *Legionella pneumophila* bacteria can also cause other diseases, such as the so-called *Pontiac* fever. This form of *Legionella pneumophila* disease is similar to the flu.

The risk of contracting *Legionella pneumophila* depends on several factors:

- the formation of relevant amounts of inhalable aerosols;
- the type of *Legionella pneumophila* bacteria that contain these aerosols;
- the amount of *Legionella pneumophila* bacteria that enters the body;
- the natural resistance of the person affected.

The incubation time (i.e. the time between contracting the bacteria and the first symptoms of Legionnaires' Disease) is 2-10 days. The first symptoms are a lot like the flu: languor, headache, (high) fever and dry cough, followed by pneumonia with fever above 39°C. It can also result in mental confusion. The fever increases and can eventually lead to death.

Legionnaires' Disease can be treated with special antibiotics. The sooner treatment begins, the more chance there is of recovery. It takes several weeks to be cured. Some (young and healthy) people may develop antibodies against *Legionella pneumophila* and have no awareness of having been ill.

The time between getting the bacteria and the first symptoms of so-called *Pontiac* fever is just 1-2 days. The attacks are serious and, contrary to Legionnaires' Disease, people who are normally speaking healthy can also be affected by *Pontiac* fever. However, the person is better after 2 to 5 days, without the help of antibiotics.

The Legionella pneumophila decree

Although there is no uniform European *Legionella pneumophila* legislation for the time being, most Western countries have their own *Legionella pneumophila* regulations.

The Flemish government made a decree on 22 November 2002 (recently amended on 10 November 2006), the so-called *Legionella pneumophila* decree, with preventive measures. All owners of a publicly accessible place where the formation of aerosol is possible and there is danger of infection must observe this decree. The formation of aerosol can take place in showers, whirlpools, air humidifiers, fountains, etc. This means that, among others, hospitals, homes for the elderly, exhibition areas, shops, restaurants, hotels, sports centres and recreational outdoor accommodation fall under the regulations. The term 'publicly accessible areas' is, however, broadly defined, so that the law also applies to, for example, owners of installations (e.g. cooling tower) that cause the spread of aerosol to public places (e.g. street).

The decree imposes concerned owners (divided according to risk level) to establish a management plan with a risk analysis and also, in certain cases, to implement several structural measures by the beginning of 2013.



In view of these market conditions a major continuous growth of the water disinfection market is generally assumed.

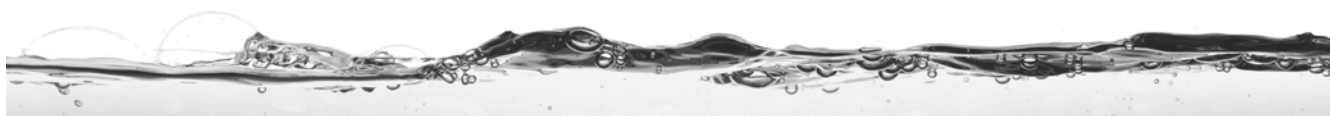
2.2.4. Competitive environment

As indicated before, the water disinfection market is also an unclear defined fragmented, rapidly changing market in full consolidation with numerous players with a variety of activities, profiles and scopes. The number of market players in Europe is estimated at over 100.⁵¹ According to the Study Flemish Water Sector, there are approximately 100 companies in Flanders (i.e. approximately 18% of all Flemish water companies), including Ecodis, which provide disinfection services (including 18 companies that supply chemical products). Ecodis is a member of the sector trade organization Thematisch Netwerk Afvalwaterzuivering Vlaanderen ("TNAV"), a network of nearly 80 Flemish companies that deliver innovative process technologies for the entire water cycle. Only a few of them, such as Ecodis, provide water disinfection services.

Below is an overview of some European players (several of which are part of large environmental or diversified industrial groups or quoted on the stock exchange) divided according to the used disinfection method:

- Ultraviolet: Wedeco (ITT), Berson UV, Lenntech Water, Beeckman, Trojan Technologies (GE Water), Sunlight Systems (Siemens Water Technology), LUT UV, Hanovia UV, IDI-Ozon
- Thermal: Grohe, Demelker
- Biocides: Solvay, Akzo, Nalco, Betz (GE Water), Wallace & Tiernan Chemfeed and Stranco (Siemens Water Technology)
- Chlorine dioxide: Guldrager, Nalco, Prominent, Alldos, Twinoxide
- Ozone: IDI-Ozon, Lenntech Water, Logisticon, Wedeco (ITT), Degremont, Blatter Ozon
- Hydrogen peroxide: Anotec, Roam Chemie
- Copper-silver ionisation: Liquitech, Ateca, Orca
- Salt electrolysis: Aquabutzke, Acquastel
- Various: Best Water Technology, Christ Water Technology, Calgon Carbon, Ionics (Danaher), etc.

⁵¹ For a global and regional overview of European market players see Frost & Sullivan Study.



According to a recent market study, three main groups can be distinguished in Europe:⁵²

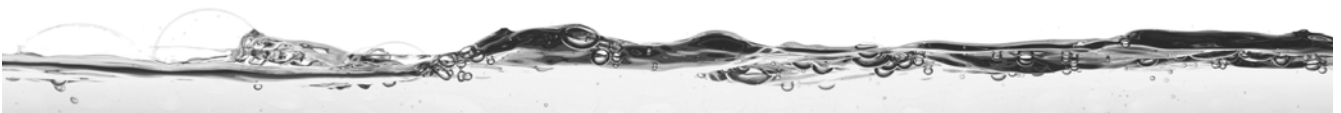
Three international companies that dispose of a strong distribution network and offer various technological disinfection solutions for mainly larger projects form a first group of companies with an estimated joint market share of approximately 30% in 2006. German company (previously quoted on the stock exchange and recently acquired by ITT) Wedeco is the European market leader with a market share of 15.4%. The market share of Siemens Water Technology (various companies) is estimated at 8.2%. Prominent had a 6.2% market share in 2006.

A second group of companies with an estimated joint market share of 40% in 2006 consists of a limited number of companies with strong local market positions in one specific technology that compete with major international players for projects in their home market: Alldos-Grundfos (5.1%), Trojan Technologies (GE Water), Berson UV, IDI-Ozonix, Hanovia UV, Arkema and GE Water.

A third group of companies with an estimated joint market share of 30% in 2006 is formed by numerous local niche players that mainly focus on smaller (mostly) industrial projects.

Just like for the entire water sector, the water disinfection market also has major merger and acquisition activities by large water, environmental or diversified industrial groups (such as General Electric, ITT, Siemens, etc.). This trend is expected to continue in the near future.

⁵² Frost & Sullivan Study.



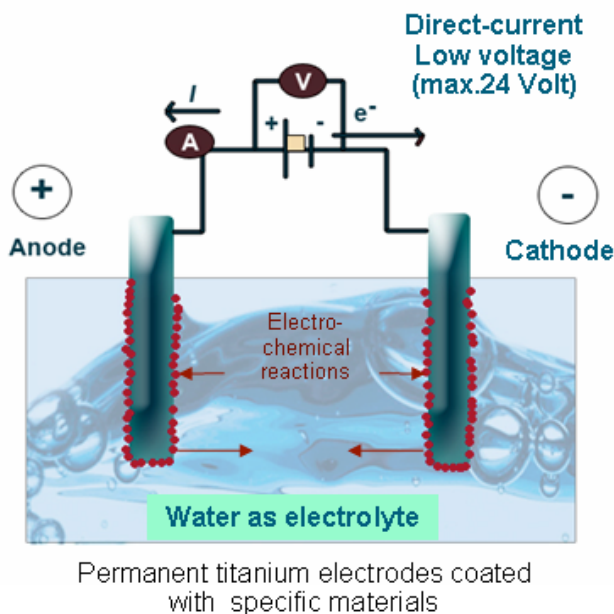
3. *ecodis*® technology, products and services

3.1 The basic principle

Ecodis developed a technology to disinfect the water.

The *ecodis*® technology can be classified under so-called physico-chemical water treatment methods. These are methods where -contrary to chemical methods- no chemicals or salts are added to the water.

METHOD



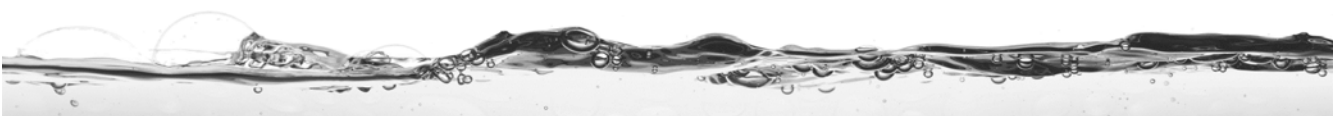
Generation of mixed “free” oxidants:

Oxygen radicals (e.g. OH^\bullet)
Chlorine radicals (Cl^\bullet)

Standard electrolysis or anodic oxidation methods are based on the generation of so-called “free chlorine”. The disinfecting components that form the free chlorine are the hydrogen hypochlorite or hypochlorous acid (HOCl) and the hypochlorite ion (ClO^-) that are in an acid-base equilibrium with each other. These components are formed at the anode through oxidation of chloride ions in the water. Chloride is a component of salts (e.g. table salt NaCl) or acids (e.g. hydrochloric acid HCl). “Free chlorine” is a powerful oxidizing agent with strong disinfecting properties. It is capable of killing bacteria, moulds, viruses and protozoans.

After an immediate disinfecting action, free chlorine also maintains a residual effect because of which water can be kept germfree for a long time. This is of major importance as water often remains for a long time in pipes and tanks after disinfection and before being used.

To be able to generate enough free chlorine in the water, salt (NaCl , sodium chloride) is systematically added to the water to obtain sufficiently high concentrations (at least 100 mg/litre chloride) of chloride



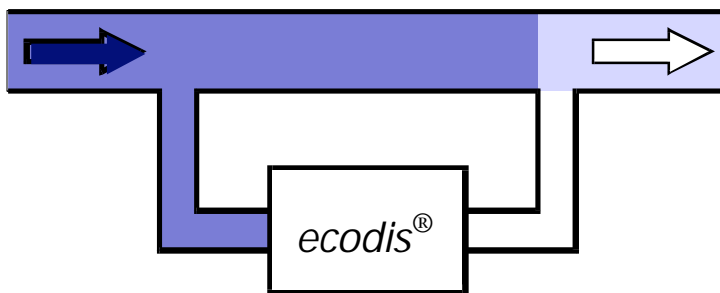
ions. Another method of generating free chlorine is to produce a high chlorine concentration *ex-situ* in a separate electrolysis cell from a brine solution. A certain amount of this concentrate is then added to the water to be treated. Both are indicated with the term salt electrolysis.

The *ecodis*[®] technology is based on the principle of anodic oxidation, which is an electrolysis process. Over the years, Ecodis developed a highly performant electrode material that makes adding salt to the water unnecessary. The basis of the *ecodis*[®] disinfecting system is formed by a flow electrolysis cell that include several permanent and inert titanium electrodes coated with a specific material. The electrodes are placed in a specific optimised configuration through which the water flows. An electric current on a (safe) low voltage level ensures that oxidants (oxygen radicals⁵³) that are partly based on oxygen are formed within the water itself –i.e. without the addition of chemicals, resulting in immediate disinfection. Alongside oxygen radicals, hypochlorous acid and hypochlorite are also formed from the chloride ions naturally found in all types of water. These guarantee a permanent disinfecting action. Even with very low chloride concentrations in the water, the *ecodis*[®] cell is capable of generating sufficiently high oxidant concentrations. Two milligrams of chloride per litre is enough to initiate this reaction.

The two types of disinfectants that are created in the *ecodis*[®] cell strongly complement one another. Field trials have indicated that certain chlorine resistant bacteria are killed by the *ecodis*[®] and that the disinfecting capacity of the *ecodis*[®] is much higher than a similar disinfecting level with NaOCl (bleach). Although not required, adding salt can considerably increase the performance of the *ecodis*[®]. However, this leads to salinisation of the water and an increased corrosion speed on, for example, galvanised steel, which is why this should be avoided.

As the *ecodis*[®] solution realises both an immediate disinfection and an efficient residual effect, in practice, treatment in bypass is often sufficient enough to keep the whole flow sterile. Because of this, investment and operation costs can be seriously reduced.

Illustration: treatment in bypass



⁵³ These are the oxygen containing radical compounds characterised by their very high reactivity, non-selective reactions and their short life (fraction of a second).



Due to the strong oxidising properties of the formed radicals in the cell, the *ecodis*[®] method is also capable of breaking down pollutants in the water. Anorganic pollutants such as cyanide, ammonium and iron as well as organic pollutants such as pseudo-oestrogens (hormone imitating chemicals) can be oxidised.

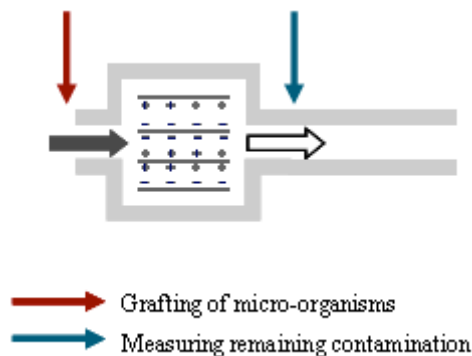
3.2 The performance of the *ecodis*[®]

3.2.1. Disinfecting efficiency

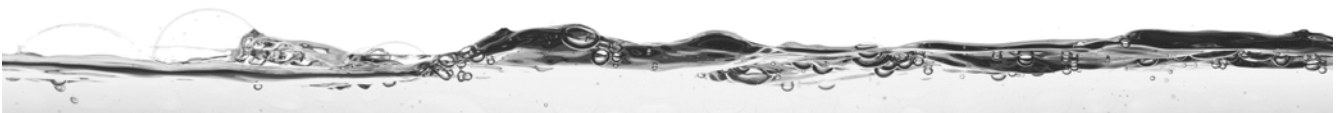
The water to be treated is disinfected immediately passing through the *ecodis*[®] cell. Besides immediate disinfection, a residual effect is realised that can last for several days thanks to remaining oxidants.

Various scientific studies have shown the disinfecting action of the *ecodis*[®] on various bacteria, viruses, mould and protozoans. Various types of bacteria such as *Staphylococcus aureus*, *Enterococcus* sp., *Aeromonas* sp., *Escherichia coli*, *Pseudomonas aeruginosa* and traces of the *Aspergillus niger* fungus were tested (several of these organisms are typically present in hospitals). After one passage through the *ecodis*[®] cell, all examined bacteria were reduced in concentration with at least a factor 10^6 (1,000,000) kve/ml or complete destruction.

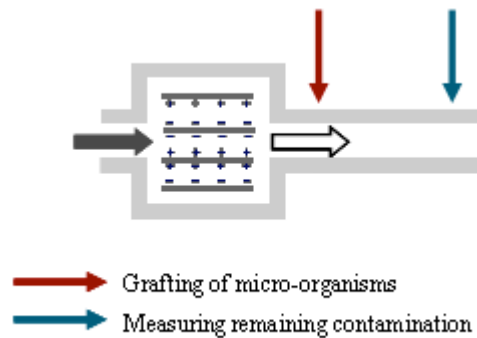
Testing the immediate disinfecting efficiency



Even for the residual disinfection -the examined bacteria were engrafted in the activated water, so after passage through the *ecodis*[®] cell- a reduction of the same magnitude (minimum 10^6 kve/ml) was achieved within a very short period. The typical hospital bacteria *Staphylococcus aureus* (10^6 kve/ml), the faecal *Escherichia coli* (10^8 kve/ml) and biofilm former *Pseudomonas putida* (10^8 kve/ml) were killed within 15 minutes of exposure to free oxidants, while *Micrococcus luteus* (10^8 kve/ml) and *Legionella pneumophila* (10^7 kve/ml) were killed within 30 minutes of exposure to 0.3 mg of free chlorine/litre water.



Testing of the residual disinfecting efficiency



These impressive results were obtained in water with a pH ranging from 7.6 to 8.2 and with a very low chloride content of 2 to 15 mg/litre.

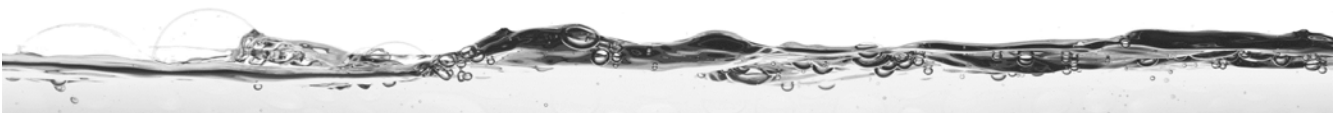
3.2.2. Biofilm removal with the *ecodis*[®]

3.2.2.1. What is biofilm?

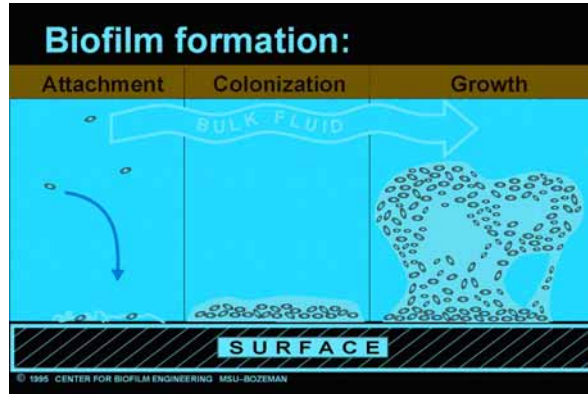
A slimy layer can often be found on the inside of a water mains pipe. This layer is known as biofilm. Biofilm originates due to the attachment and growth of micro-organisms on the pipe surface. To accomplish their growth, they use nutrients that are naturally found in water, even in drinking water. The most important nutrients are assimilable organic carbon compounds, nitrogen and phosphorus. Biofilms are found in large quantities in all mains.

Various factors, such as the mains material, the water flow and the composition of the water influence the growth rate, the biomass and the shape of the biofilm. In new water mains, the formation of biofilm can already be observed after a few weeks.

After the pipe surface has been colonised by micro-organisms, micro-colonies are formed that produce a mixture of external natural polymers (such as sugar polymers). These form a three-dimensional structure that is attached to the surface and in which the bacteria live. A schematic representation of biofilm formation is presented in the figure below.



Schematic representation of the formation of biofilm



Source: CBE, Montana State University–Bozeman

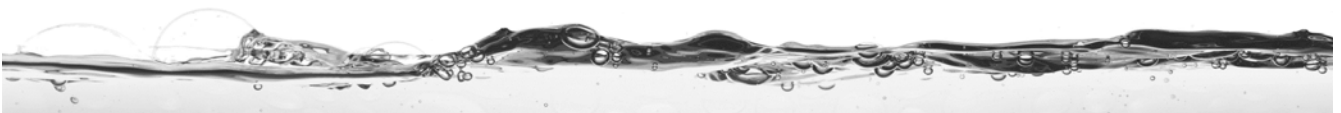
The problem with biofilm is that it provides shelter to micro-organisms, and the presence of nutrients can induce an explosive growth. The formation rate of biofilm is influenced by, among others, the pipe materials used, the residence time in and temperature of the water. Moreover, the temperature of cold, stagnating water in the pipes can also be influenced by the surrounding temperature. Water temperature between 20 and 50°C is optimal for the growth of micro-organisms.

When biofilm is present in the water mains, disinfected water supplied to the mains can be recontaminated if it remains there for some time.

Bacteria that attach themselves to a surface and grow in biofilm transform to a fundamentally different form compared to the free bacteria in the water and are usually more resistant to disinfection. Biofilm also offers protection against higher temperatures, e.g. when rinsing with warm water. Bacteria can also detach themselves from biofilm and return to their free form. This can be done with individual cells or groups of cells.

3.2.2.2. Biofilm structure

Different types of biofilm have been observed in various environments. Some micro-colonies form conical structures that can develop into mushroom-type structures. These structures can exist individually with in between a thin layer of attached bacteria. However, sometimes these structures attach themselves at the top, creating larger structures. Channels in the biofilm ensure that the water can permeate into the structure and can distribute nutrients all over. This way, biofilms can obtain a considerable thickness without the individual cells lacking nutrients.



3.2.2.3. Advantages for bacteria that colonise biofilms

The formation of biofilm is so universal because it offers several major advantages for the bacteria that live within. There is a higher concentration of nutrients in the biofilm. Nutrients can absorb to the surface and thus seriously increase the nutrient concentration locally. Metabolic interaction can also occur between the organisms. Together, the micro-organisms can use substances that they cannot break down on their own.

Micro-organisms in biofilm are also more resistant to conventional antibiotics, biocides and hydrodynamic shear forces than their free-living counterparts. Several theories explain the increased resistance. For large molecules, the polymer matrix limits diffusion of biocides. Negatively charged polymers can also bind positively charged biocides. Some cells can also survive disinfection by entering a state of rest in which they have more resistance. When the disinfection treatment is over, they can also survive on the organic remains of dead cells.

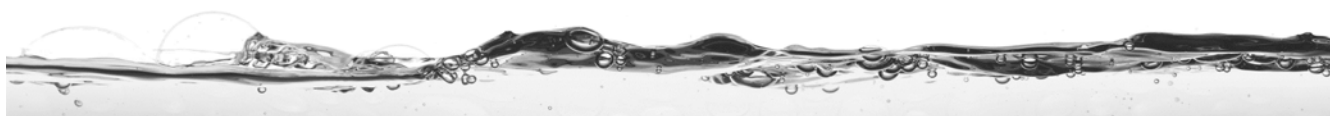
3.2.2.4. Problems associated with biofilm: *Legionella pneumophila*

Various problems are attributed to the formation of biofilm. For example, biofilm can lead to a decreased heat transfer in heat exchange systems and to increased corrosion.

Another major and underestimated problem is an increased risk of *Legionella pneumophila* contamination in systems with biofilm. *Legionella pneumophila* bacteria are the causers of Legionnaires' Disease. Most cases of Legionnaires' Disease originate in man-made environments where the water temperature is higher than the surrounding temperature, such as hot water systems (showers, whirlpool) and cooling-water systems (air conditioning, cooling towers). Contamination occurs after inhaling small water droplets (aerosols) containing *L. pneumophila*. The incubation period varies from 2 to 10 days. Symptoms include: fever, dry cough, headache, tremors queasiness, diarrhoea and delirium. Risk factors for catching the disease are: chronic lung disease, cancer, weakened immune system, chronic illnesses, old age and smoking. Normally speaking, the mortality rate does not exceed 15%, but a maladjusted treatment or serious underlying illness can raise this rate to 40%.

Another major aspect in the human ecology of *L. pneumophila* is the interaction with biofilms. These offer the bacteria extra protection in unfavourable conditions.

Research has indicated that *Legionella pneumophila* can survive in biofilms in the water distribution system of buildings. In pipes with more biofilm, more *L. pneumophila* was detected. Biofilm associated *Legionella pneumophila* bacteria are better protected against biological, chemical and physical influences from the environment, so they are harder to combat. The association of *L. pneumophila* with biofilms dramatically increases resistance against disinfection agents. This is because the disinfectant must penetrate the biofilm to get to the bacteria. *L. pneumophila* in a biofilm is for example 100 times more resistant against iodine than free cells. For *Legionella bozemanii* it has been demonstrated that four times the concentration of chlorine is needed to kill them off in a biofilm compared to free-living cells.



3.2.2.5. Biofilms in practice

Historically developed mains with numerous branches in cellars, ceilings and less used spaces often prevent an efficient treatment of biofilms and associated microbial contamination.

This is why the so-called *Legionella* pneumophila decree has been laying down regulations to risk institutes such as rest homes and hospitals regarding the prevention and combating of *Legionella* pneumophila in mains since 2002.

Similar problems are occurring in, for example, the food industry, agriculture and horticulture where the focus is on bacteria such as *Salmonella* and *Listeria* in biofilm rather than *Legionella* pneumophila.

3.2.2.6. Physical removal of biofilm by the *ecodis*®

Not only does the *ecodis*® prevent the formation of biofilm, but also breaks down the existing biofilm physically.

Several experimental scientific studies with KIWA biofilm monitors (carried out by Antwerp drinking-water company PIDPA) indicate that 85% of the original ATP level (adenosine triphosphate) is removed within several hours after switching the *ecodis*® on (Figure 1). No measurable ATP concentrations are found after two days. ATP is responsible for the energy management of a cell and is the denominator of all living cells that may be found in biofilm. In other words, the ATP concentration decreases when bacteria and living organisms in biofilm are destroyed.

Chemical breakdown of biofilm leads to an increase in concentration of assimilable organic carbon (AOC) in the water. Assimilable means that particular part of organic compounds which could serve as source of nutrition for any present micro-organisms.

Measurements carried out by PIDPA (as part of an SVW-project (Samenwerking Vlaams Water)) show that the AOC concentration in the water stays constant at the sampling points just before and after the *ecodis*®, while there is a considerable increase using other disinfection methods (such as chlorination and ozonation). These measurements also show a temporary increase of AOC concentration further down the mains, which then stagnates and ultimately decreases over time and reverts to the original measured values. This temporary increase of the AOC level confirms that the *ecodis*® physically breaks down the biofilm as well as killing living cells in the biofilm. These AOC fractions are eventually removed from the mains through the use of water.



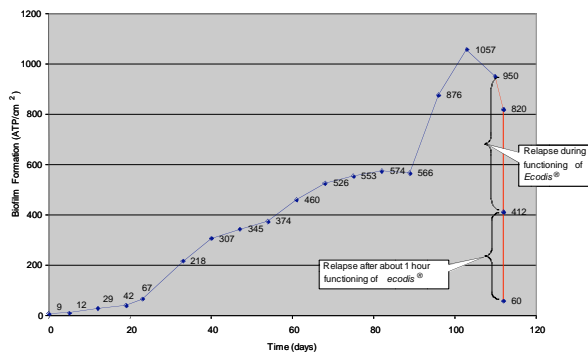


Figure 1: Evolution of bio-film in a KIWA-biofilm monitor

— : Biofilm growth in 112 days
— : Destruction of biofilm after turning on the *ecodis*®
(Complete destruction of biofilm after several hours)

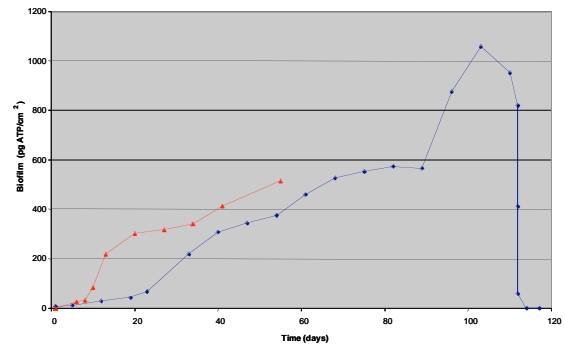


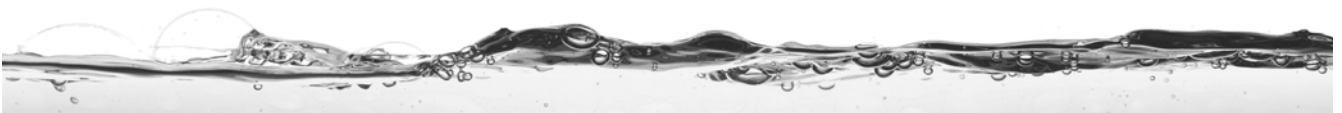
Figure 2: Biofilm growth and resumption of growth of biofilm in a KIWA-biofilm monitor

— : growth and killing of biofilm see Figure 1
— : resumption of growth of biofilm after switching off the *ecodis*®

3.2.3. Conclusions

The *ecodis*® technology guarantees perform a complete disinfection of the mains. This is realized by a unique “4-step process”:

- First, the *ecodis*® creates a barrier at the incoming cold water: entering bacteria are instantly killed in the electrolysis cell.
- The electrolysis cell produces oxidants bringing about a permanent residual disinfection. Bacteria further on in the water flow are eliminated in this way.
- A third action of the *ecodis*® is the killing of the biofilm. Recontamination of the water by bacteria from the biofilm is consequently excluded. Biofilm (also in cold water) is the major cause of bacteriological infection.
- A fourth and final step involves the gradual removal of the biofilm, thus preventing new micro-organisms from using the dead biofilm as nutrition.



3.3 The *ecodis*[®] system

3.1.1. *ecodis*[®] hardware

The self-developed *ecodis*[®] installation consists of the following components that have been designed, produced, assembled, configured and tested by Ecodis:

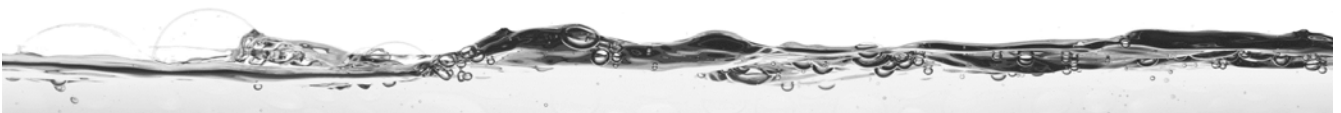
- electrolysis cell(s);
- electrolysis board with piping, valves, sampling taps and flow meters;
- electro-cabinet with a current driven direct current power supply, a microcontroller for system management, data communication and data logging;
- sensors for measuring free oxidants, temperature, pH, pressure and conductivity, flow in the main flow and in the bypass;
- optional: water-softeners, automatic back-flush filters, automatic discharge valves.

Ecodis aims to standardise as much as possible. “*Plug-and-play*” modules for specific water flows can be conceived to prevent a thematic project approach. This will make the collaboration with (foreign) partners much easier.

The *ecodis*[®] cell is the heart of the installation. The cells that are being commercialised at the time of this Prospectus have been designed for the treatment of (drinking) water in flows of 0.5 m³, 1 m³, 2 m³, 3 m³ and 5 m³ per hour per cell.

Depending on the water parameters, configuration software can be used to automatically determine the correct dimensions for the *ecodis*[®] installation. This also includes the partial water flow to total water flow ratio.

The electrolysis cells can be used to treat both cold and hot water (up to 60 °C).





Typical installation:
1 cell of 4 m³/h placed in bypass of the main pipe for treating a total water flow of 20 m³/h.



Typical installation:
4 cell of 5 m³/h placed in bypass of the main pipe for treating a total water flow of 40 m³/h.



To treat higher flows, multiple *ecodis*® cells can be mounted in parallel. Using piping and collectors, the cells are connected together. The modulation of the *ecodis*® installation anticipates eventual future expansion by the client.

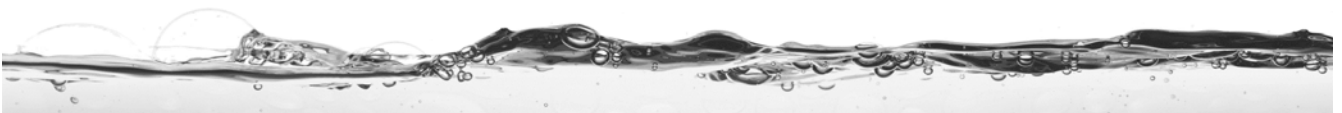


Typical installation:

4 cell of 5 m³/h placed in bypass of the main pipe for treating a total water flow of 60 m³/h.



Mobile unit equipped with two 5 m³/h cells



The mobile *ecodis*[®] is mostly used for the decontamination of pipes or for performing pilot tests. Disinfection with *ecodis*[®] is a process that is permanently and remotely controlled and monitored. The generation of disinfectants must be regulated to a safe level within the drinking water standard under all circumstances. Measurement, regulation and communication technologies are therefore required.

Ecodis developed all the electronic hardware, including a microcontroller (motherboard), with its own means. The microcontroller is the central unit that provides the possibility for simultaneous operation and control of a maximum of 24 *ecodis*[®] cells. The memory capacity of the controller is extensive enough to save all data every 30 seconds for a period of one month. These data can be sent to a central server at Ecodis using communication equipment.

The process and its parameters are displayed on a GUI (“*Graphical User Interface*”) via COM, USB on the computer, with self-developed *ecodis*[®] software for Windows. Remote communication is provided by an analogue modem or optionally by a GSM-GPRS-UMTS modem or ethernet connection.

The *ecodis*[®] controller construction is built in a modular way which guarantees full flexibility and expandability. This enables to remotely monitor all possible *ecodis*[®] configurations, in or not in combination with peripheral equipment, and to link it with the client's user management systems.

The whole concept is powerful enough to be able to handle more complex product developments (e.g. cooling towers) in the future.

The development of the *ecodis*[®] controller with its own embedded software (with source code) protects Ecodis against “*reversed engineering*”.



ecodis[®] controller for operating 4 *ecodis*[®] cells.



The microcontroller consists of the following components, which are also being developed internally:

- the display;
- the “touchscreen” keyboard;
- the interface card(s) (“miscellaneous interface card(s)”);
- the interface to telephone or gsm modem or optionally via ethernet.

A “touchscreen” display shows *real time* information of the process parameters and the *ecodis*® cell (temperature, pH, water flow, free chlorine, current/voltage on the cell, etc.). By pushing a button on the screen, calibration procedures can be initiated. On the screen messages can be read about the operation or the alarm status. The Ecodis logo, address, email, telephone and fax number are also shown.

The “miscellaneous interface car” is the interface between the microcontroller and the operation/measurement of all the converters that are needed for the optimal functioning of the *ecodis*® cell(s). This card takes care of the digital-analogue and analogue-digital conversion for operating the current-driven power supplies, measuring the current voltage profiles for each *ecodis*® cell and converts the measurement signals from various sensors and position detectors from e.g. regulation taps, etc. into digital signals. These signals are interpreted and processed by the microcontroller and make it possible to program spray valves and operate position valves remotely. There are control-inputs for the detection of static sensors (floats, water sensors,...) and the card has potential free contacts for operating pumps, spray valves, etc. Each “miscellaneous interface card” enables the full operation and monitoring of up to two *ecodis*® cells with all their controllable parameters.

Every *ecodis*® cell requires a stabilised power supply. The power supply from the main supply (or solar energy or battery power) is converted into a galvanically isolated direct current. The setting of the direct current source is managed by the *ecodis*® microcontroller.



Example *ecodis*® controller



3.3.2 *ecodis*® software

Data logging, alarm monitoring, software upgrade, setting parameters, event logging, etc. can be requested via the *ecodis*® server.

3.3.2.1 *ecodis*® system configuration software

Ecodis has developed a system configuration software that makes it possible to configure new complex disinfection installations via the web. Through a menu (foreign) partners in a specific location are able to dimension the *ecodis*® relatively easy, with a number of necessary parameters.

3.3.2.2. *ecodis*® “*embedded*” software and user license

The self-developed “*embedded*” software ensures automatic regulation of the level of disinfectant for every cell in the *ecodis*® installation. Depending on the water parameters, in circulation or direct flow regime and other measurement information, the correct electrical currents are generated via the current-driven direct current power supplies to achieve the optimal level of disinfection. The client must have a user license that has been validated when logging in to *ecodis*® server for the first time.

The *ecodis*® cell can be used in both a direct water flow or in a circulation regime. As stated earlier, *ecodis*® can be switched to bypass treatment in a direct flow regime, depending on the water parameters. Variable water flows in the main supply result in more or less electric direct current on the *ecodis*® electrodes. The level of oxidants produced is automatically measured by a measuring unit, located on the main pipe after mixing water of the bypass with the water in the main flow. The level of disinfection is always regulated within the current drinking water standards.

For optimal control of the process, parameters such as the flow, temperature, concentration of free oxidants, acidity level (pH), conductivity, position of regulation valves and spray valves can be measured and monitored remotely. If one of the measured water parameters is above or below the limit or if one of the components to be monitored is not functioning properly, an alarm signal is generated and transferred to the *ecodis*® server via the modem. The *ecodis*® installation is shut down automatically in case of serious problems for safety reasons. After data logging and interpretation of the data received, and depending on the seriousness of the dysfunction, it can be decided that intervention from an *ecodis*® service engineer is required.

The *ecodis*® “*embedded*” software is loaded via the *ecodis*® server every time it is used for the first time. This is done using remote communication after the client or partner has accepted the conditions for using the *ecodis*® installation and met their obligations.



3.3.2.3 *ecodis*[®] supervision software

The *ecodis*[®] supervision software enables on-line monitoring, two-way communication and control of the disinfection process. Remote communication can request data automatically for analysis and control via an internet platform. This will be explained in more detail in the following section.

3.4 **The *ecodis*[®] service model as a total solution**

3.4.1. General

Ecodis aspires to more than just providing a technical solution for disinfecting water. Ecodis proposes a total solution whereby its clients are offered a maximal comfort level for carrying out and managing their water disinfection, with the help of a supervised program and a service plan.

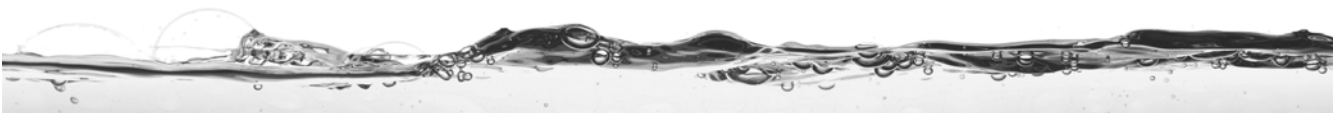
Using a full package of services, Ecodis positions itself as a “*solutions provider*” with a total solution. This service model aims to establish an optimal long-term client relationship and the generation of recurrent annual incomes.

The *ecodis*[®] total solution currently includes the following optional services:

- *pre-sales*: technical audit, technical and commercial engineering;
- *sales*: assembly, putting into service and training;
- *after-sales*: preventive maintenance, on-line follow-up and monitoring, coaching, emergency centre, periodic analysis reporting, internet platform, full omnium formula, additional training, advice, etc.

Ecodis has signed service agreements for almost all its projects and with all its clients. This now concerns around 70 annually terminable, permanent agreements, spread over some 50 clients. Almost all agreements include preventive maintenance and emergency centre services. The vast majority of the annual incomes from these agreements are of course dependent on the services provided and the scope of the project but currently amount to an average of around 5 to 10% of the project turnover.

Ecodis wants to improve, refine and expand its range of services in the future through further development of its software and the provision of client-specific internet platforms no later than 2008. At the same time as the gradual expansion of its sales organisation, Ecodis also wants to promote a range of services commercially as a priority. In the medium-term Ecodis is aiming for a contractual service or exploitation model with a sales payment based on the number of cubic metres of water processed for certain product groups.





3.4.2. Audit and engineering

During the *pre-sales* phase, Ecodis will carry out a full audit to dimension and engineer the *ecodis*® installation optimally. Following technical information needs to be analysed:

- the composition and quality of the water to be treated;
- the water consumption and (peak) flows;
- integration possibilities within the existing network of pipes;
- minimum number of required water parameters.

If the fluctuations in water flow are not known, Ecodis can assist by installing data loggers.

In the context of the Flemish *Legionella* Decree from 2002⁵⁴, Ecodis will – if necessary – provide advice and supervision, in partnership with external risk analysts, for carrying out a risk analysis and setting up or adapting legally liable management plans for the prevention of *Legionella*.

If it appears to be necessary to carry out pilot tests for client-specific problems, then tests can be carried out on the basis of a collectively drawn-up protocol with *ecodis*® mobile units.

⁵⁴ See 2.2.3.2.



The audit results and a data logging of the flows can be used to customise the dimensioning, determine the appropriate engineering and draw up a proposal for the *ecodis*® installation. A detailed customized proposal also includes an extensive optional *post-sales* package of services. The various commercial possibilities and formulas such as renting, hire purchase, *leasing*, (omnium) insurance, etc. are also offered in this phase.

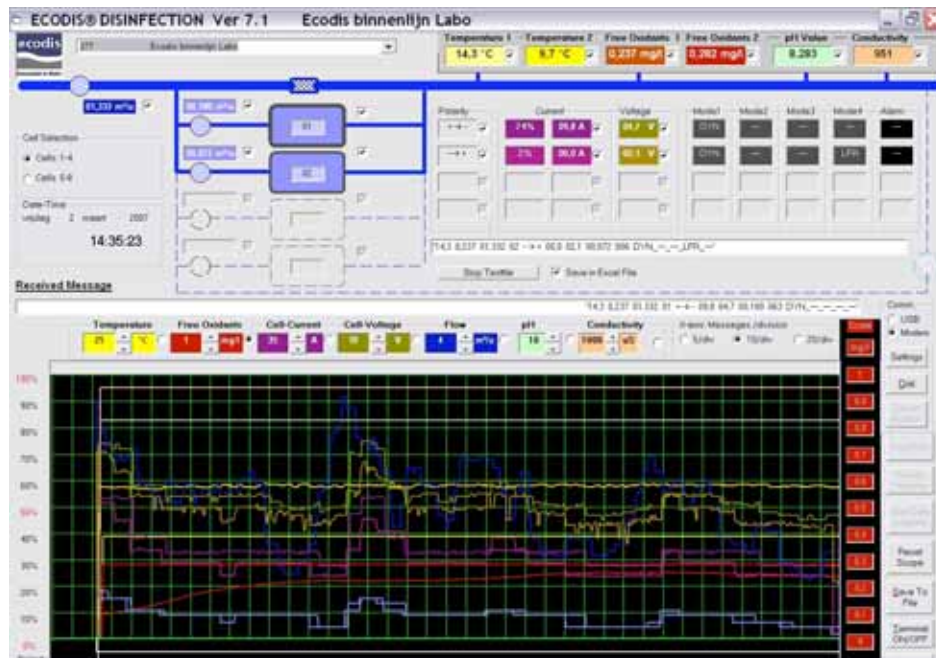
3.4.3. Assembly, start-up and training

Ecodis is responsible for the supervision of the assembly, integration and starting up (including training) of the *ecodis*® systems at their clients. Ecodis has its own team of plumbers and technicians for integrating their installations in a simple network of pipes. Ecodis works with specialist sanitary subcontractors for more complex installations.

3.4.4. After-sales services

Ecodis has a full package of chargeable services optionally available to its clients, such as:

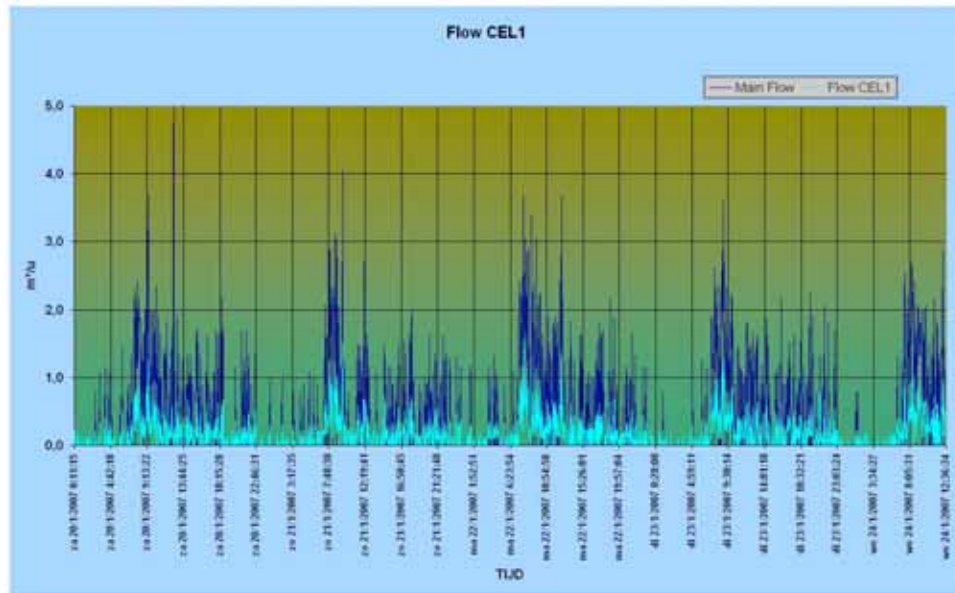
- periodic control and maintenance of the *ecodis*® systems with various contract formulae;
- on-line monitoring: Ecodis has its own system supervision software with which the disinfection process can be remotely monitored from its offices in real time, and adjusted if necessary.



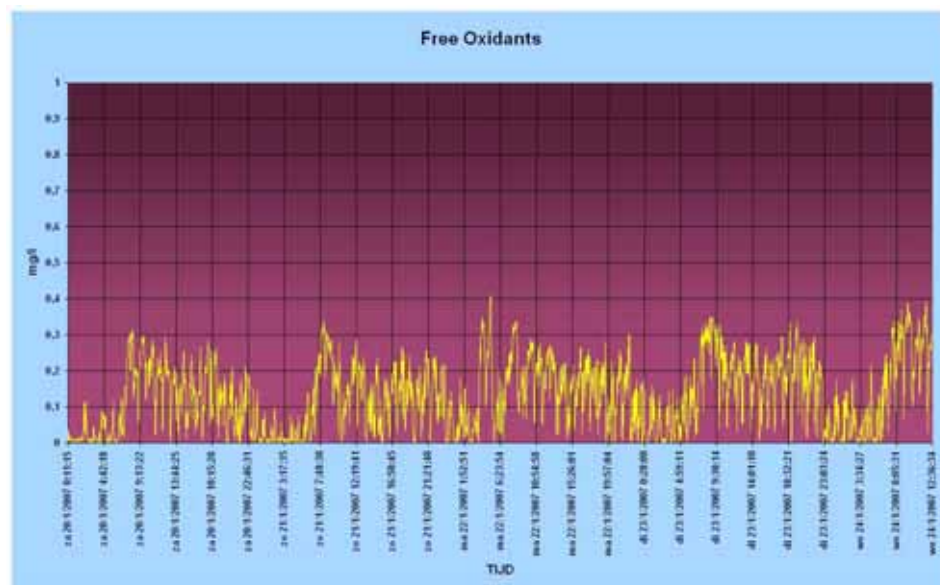
Example on-line monitoring screen.



- analysis and reporting: periodic reports with detailed information, analyses and advice can be made available based on the data obtained with the on-line data logging of various system and water parameters using the Ecodis software.



Example: data logging screen of the main water flow and the flow in bypass through the cell



Example: data logging of the corresponding free oxidants concentration of the flows shown above



- emergency centre: alarm registration, dial-up and alarm interventions;
- coaching, training and advice: thanks to its extensive knowledge and expertise of water and water treatment, Ecodis can provide customized related services such as specific coaching in the execution of the management plan, the provision of training course, seminars, advice, lectures, etc. The coaching program enables the customer to get maximum returns from the implementation and guarantees in this way the quality and excellent results of the disinfection process.

Provided that the client carries out the full service package, Ecodis can reward him with the "Protected Water Area" quality label.



3.5 The benefits of *ecodis*[®]

The *ecodis*[®] system provides an added value in the water disinfection market. It is a sustainable and safe technology that guarantees protected water.

ecodis[®] is a sustainable technology:

- no chemicals are added to the water;
- in contrast to other anodic oxidation techniques, no addition of salt;
- disinfectants are generated from compounds present in the water itself;
- almost fully closed cycle: the disinfectants produced react for the most part back to the compounds they were created from;
- Due to the special electrodes there is only a very low energy consumption.

ecodis[®] is a very efficient technology:

- bacteria, viruses and fungi are killed quickly;
- very efficient tackling of *Legionella* and other hospital bacteria in water;



- one of the few technologies that can remove biofilm in a preventive way;
- no odour or taste problems after the treatment of the water;
- no corrosion problems occur;
- Treatment with the *ecodis*[®] reduces the organic nutrient content in the water (AOC), which slows down the growth of micro-organisms and biofilm;

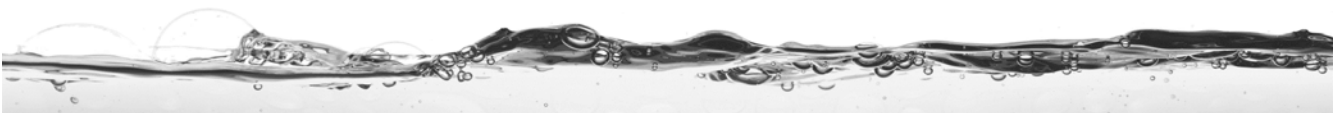
ecodis[®] is a technology that has a number of important benefits regarding safety and health:

- transportation and storage of dangerous chemicals is unnecessary because of the *on-site* creation of disinfectants;
- no safety risks from chemical leakages;
- no danger of explosion;
- no danger of burning;
- no chemical residue or waste products;
- direct current at a low voltage flows between the electrodes without risk of electrocution;
- very limited production of chlorinated by-products in the water;
- the disinfection takes place very homogeneously;
- removal of harmful pollutants such as cyanides, ammonium and pseudo-oestrogens.

As such *ecodis*[®] stands for a complete disinfection in an ecological way.

ecodis[®] is a cost-efficient technology:

- almost no manual intervention is required during operation;
- no addition of chemicals which makes additional operational costs unnecessary;
- the system is positioned on the cold water circuit which means that infections in the hot or mixed water circuit are also intercepted and additional investments (adapting the pipe systems and upgrading boilers) and management costs (corrosion, extra personnel, energy) are kept to a minimum in this way;
- a negligible energy cost (20 to 50 Watt per m³ treated water);
- the installation requires few adjustments to the existing network of pipes and because bypass treatment is usually chosen, the cost of investment for the electrolysis cell can be dramatically reduced on basis of an optimum dimensioning.



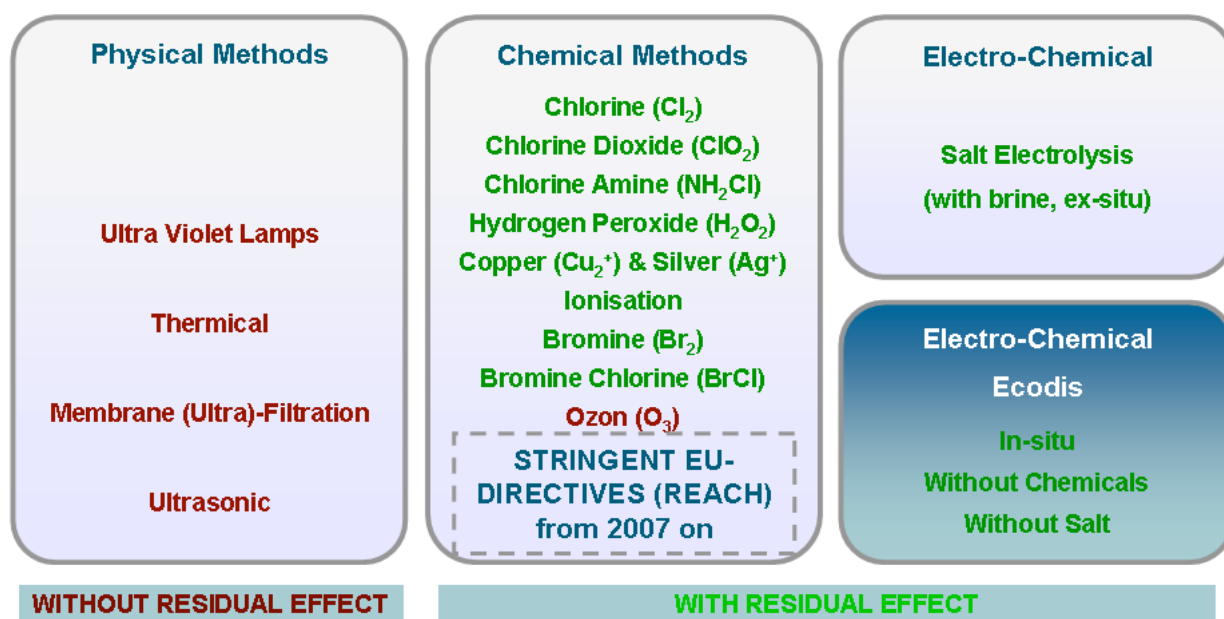
In combination with the optional on-line monitoring system developed by Ecodis, *ecodis*[®] is also a very user- and maintenance-friendly disinfection method. After all Ecodis can monitor and adjust the disinfection process remotely, via modem or telephone line.

3.6 Technological positioning

There are a whole range of technologies available for disinfecting water. Some have been in use for years, and newer methods are also emerging. The main motive for the development of new techniques is, alongside economical reasons, the reduction of the impact on the environment. An overview of the current and predicted evolution of the market shares per class of technology is included in part 2.2.2.

In the following, a global overview of the various methods is given. The most common disinfection techniques are discussed briefly. Finally a comparative study, which shows the unique technological positioning of the *ecodis*[®] technology, is presented.

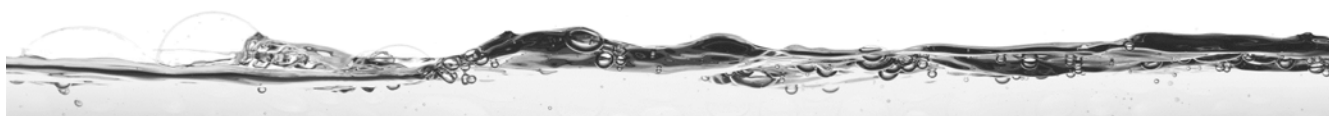
ecodis[®] integrates the advantages of all major alternative technologies



3.6.1 Overview of disinfection methods

3.6.1.1 Chemical methods

These methods are based on the addition of disinfecting chemicals (biocides) to the water to be treated. Two types can be distinguished, depending on their working principle: oxidising biocides and non-oxidising biocides. Biocides from the first category kill micro-organisms through non-selective



oxidation processes. This leads to the degradation of different cell structures in the micro-organisms so that they die. Non-oxidising biocides kill micro-organisms by stopping selectively specific processes in the cell. In this category a series of organic compounds with a wide range of structures are comprised that affect different metabolic processes in the micro-organism such as cell breathing, nutrient uptake,...

The most important oxidising biocides are hydrogen hypochlorite (HOCl), chlorine dioxide (ClO₂), hydrogen peroxide (H₂O₂) and ozone (O₃). These will be discussed in more detail later. Other methods are less frequently used. Chloramines (combination of ammonia and chlorine) are for example less suitable for killing micro-organisms quickly, but are able to keep infected water germ-free for a long period thanks to their ability of penetrating the biofilm more efficiently and killing micro-organisms⁵⁵. Chloramines are often responsible for the typical chlorine odour and taste in treated water.

Non-oxidising biocides are generally only used in applications where oxidising biocides do not reach the required level of disinfection or when there are unwanted side-effects (corrosion) related to the use of high concentrations of oxidising biocides. Non-oxidising biocides are difficult to break down naturally and remain in water for a long time. This can make them harmful to people and environment.

A technique balancing between the chemical and physico-chemical methods is copper/silver ionisation (Cu/Ag). This method indirectly adds heavy metals directly to the water. These components are however not oxidising and will for example not remove biofilm.

3.6.1.2 Physico-chemical methods

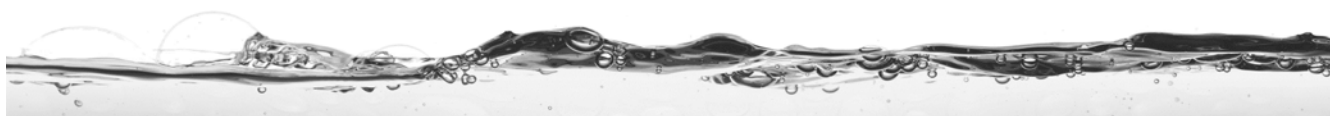
In recent years, there has been a growing trend of methods that no longer have to add chemicals. This tendency is being driven by REACH, the new European legislation for hazardous chemical substances⁵⁶.

Techniques that do not require any direct addition of chemicals are catalogued under the heading physico-chemical techniques. The killing of microbiology is achieved by physical effects or induced chemical processes in the water. The most important physico-chemical methods are: thermal treatment, UV irradiation, membrane technologies, salt electrolysis and *ecodis*[®].

The disinfection of water with filtration techniques using membranes is not based on killing micro-organisms but on their selective removal from the water. That is why filtration always needs to be combined with a follow up post disinfection step as the smallest leakage in the membrane can lead to a significant infection. Filtration is therefore not considered to be a competing technology with the *ecodis*[®], but more as a complementary one, and is not discussed further.

⁵⁵ United States Environmental Protection Agency, *Alternative disinfectants and oxidants guidance manual*, April 1999, Chapter 6 Chloramines.

⁵⁶ European rulings for Registration, Evaluation and Authorisation of (hazardous) Chemical Substances, see footnote 2.



3.6.2 Review of the most important disinfection methods

3.6.2.1 Classical chlorine addition

The classical addition of chlorine is based on the disinfecting effect of so-called “free chlorine”. The components that make up free chlorine are the hydrogen hypochlorite or hypochlorous acid (HOCl) and the hypochlorite ion (OCl⁻), which are in an acid-base equilibrium with one another⁵⁷.

The disinfecting capacity of both components is however very different; it is almost exclusively HOCl that is responsible for disinfection. This implies that the pH (acid level) of the water to be treated is a very important parameter⁵⁸.

Free chlorine is obtained in water by dissolving chlorine gas or adding a salt solution of sodium hypochlorite (NaOCl). This latter method is most commonly used for safety reasons. A disadvantage is that the sodium hypochlorite solutions are chemically unstable: at room temperature the active chlorine content decreases with about 1 g/l per day. Building up a large stock is therefore not beneficial. The addition to the water flow is either continuously or discontinuously using pulse dosing. The required dosage depends on the composition of the water. The presence of ammoniac nitrogen and organic material in the water largely influences the dosage required.

The classic chlorine addition is a simple, proven disinfection technique that has been in use for a long time. In Belgium, it is classified as the best available technique (“BAT”) for disinfecting swimming pool water^{59/60}. Despite this, a number of disadvantages of this method appeared over the years. It has been recorded that chlorinated by-products are formed that are harmful to our health⁶¹. The trihalomethanes (THM) form the most important class. Furthermore, the disinfection with chlorine is also unilateral so the danger exists that bacteria can develop chlorine resistance.

3.6.2.2 Chlorine dioxide

Chlorine dioxide (ClO₂) is formed in the reaction of sodium chlorite with hydrochloric acid, chlorine gas or hypochlorite. A correct mixing ratio is required to get a pure solution, without residue from both chemicals^{62/63}. This is why ClO₂ generation is usually outsourced to specialised companies. The

⁵⁷ Galal-Gorchev, H., Chlorine in water disinfection, *Pure and applied chemistry*, 68 (1996) 1731-1735.

⁵⁸ Barbeau, B., Desjardins, R., Mysore, C., Prévost, M., Impacts of water quality on chlorine and chlorine dioxide efficacy in natural waters, *Water Research*, 39 (2005) 2024-2033.

⁵⁹ No BBT has yet been set for disinfecting drinking water.

⁶⁰ Van den Abeele, L., Vercaemst, P. and Dijkmans R., Best Available Techniques for swimming baths 2000/IMS/R/003, VITO, 2000.

⁶¹ Boorman, G.A., Dellarco, V., Dunnick, J.K., Chapin, R.E., Hunter, S., Hauchman, F., Gardner H., Cox, M. and Sills, R.C., Drinking water disinfection byproducts: Review and approach to toxicity evaluation, *Environmental Health Perspectives*, 107 (1999) 207-217.

⁶² Gordon, G. and Rosenblatt, A.A., Chlorine dioxide: The current state of the art, *Ozone Science and Engineering*, 27 (2005) 203-207.



maximum concentration of chlorine dioxide for continuous dosing is limited to 0.2 mg/litre because of the formation of chlorite as a decay product of chlorine dioxide⁶⁴. This makes the technique less suitable for continuous use and chlorine dioxide is therefore generally added in high concentrations, after which the solution has to work in for a few hours. The treatment must be repeated regularly to be effective. The network of pipes cannot be used for drinking water purposes during the treatment.

There are important safety risks related to the production of ClO₂. Because chlorine salts can decompose thermally, there is a risk of explosion by inappropriate mixing.

Some suppliers also provide chlorine dioxide as a ready-made solution, but these have a limited storage life of maximum six months.

Chlorine dioxide is often used as a pre-oxidation method in the chlorination or ozonisation of drinking water. By far and away the biggest application for chlorine dioxide is the bleaching of paper.

Chlorine dioxide is an efficient disinfectant. It kills bacteria by interrupting various metabolic processes in the cells and also kills viruses. Chlorine dioxide is 5 to 10 times more expensive than chlorine. Problems related to the production of ClO₂ and the formation of the harmful by-products chlorite and chlorate are important disadvantages.

3.6.2.3 Hydrogen peroxide

A third chemical disinfection method is the addition of hydrogen peroxide (H₂O₂). This method is mainly used in the removal of pollutants in waste water but has started to win a market share for water disinfection over recent years. Hydrogen peroxide is often used in the removal of pollutants in combination with UV light or metallic catalysts⁶⁵.

The addition of hydrogen peroxide is a very simple technique that is not influenced by the pH of the water and does not produce any harmful by-products⁶⁶. Hydrogen peroxide is unstable in water so diluted solutions are used that are often stabilised by adding certain chemicals such as silver (heavy metal and toxic).

High dosages are often required for disinfection⁶⁷. Cooling water applications are seen as being unrealistic from an economic point of view. The use of H₂O₂ as a method for combating *Legionella* is only suitable for a short-term and periodic treatment (24 hours)⁶⁸.

⁶³ United States Environmental Protection Agency, *Alternative disinfectants and oxidants guidance manual*, April 1999, Chapter 4 Chlorine dioxide.

⁶⁴ Liste der Aufbereitungsstoffe und Desinfektionsverfahren gemäß, §11 Trinkwasserverordnung 2001 (Stand November 2006).

⁶⁵ Schulte, P., Bayer, A., Kuhn, F., Luy, Th. and Volkmer, M., H₂O₂/O₃, H₂O₂/UV and H₂O₂/Fe²⁺ processes for the oxidation of hazardous wastes, *Ozone Science and Engineering*, 17 (1995) 119-134.

⁶⁶ Disinfectants, hydrogen peroxide, <http://www.lenntech.com/water-disinfection/disinfectants-hydrogen-peroxide.htm>

⁶⁷ Oosterholt, F.I.H.M. en van Pelt, A.J., Health & Safety Information Legionella, 2004, Ziest: Sdu publishers.

⁶⁸ Gruwez, J. en Deboosere, S., Combating Legionella in Cooling Towers (part 2), *Environment technology*, 7 (2003).



Hydrogen peroxide is corrosive in high concentrations. The system of pipes must be rinsed sufficiently after application of the product so that all remnants of the product are removed.

3.6.2.4. Ozone

Ozone is one of the most powerful disinfectants that are used in practice. It kills micro-organisms by breaking down the cell wall.

Ozone is a gas and must be produced *on site* from dried air or pure oxygen gas by using electrical discharge or UV radiation. The oxygen/ozone gas mixture formed must then efficiently be mixed with the water to be treated. Because the residual gas always contains some ozone, it needs further treatment⁶⁹.

Ozone is not stable in water and will decompose spontaneously. The rate of decomposition is mainly determined by the pH and temperature, but also by other water characteristics^{70/71}. Because of its short lifespan, ozone therefore also has a very limited residual effect. This means that ozone generally is used together with a chlorine-based disinfectant⁷². A number of very reactive oxygen containing compounds are formed in the ozone decomposition reaction that can also contribute to the disinfection or breakdown of pollutants.

The main disadvantage of the ozone technology is the high cost⁷³. The investment costs (ozone generators, gas preparation system, gas-water contactors, ozone destruction units, etc.) are considerable, and the operational costs are also very high. The production of ozone from oxygen or air has a low yield and the energy consumption for mixing gas and water is also significant. The system of pipes also needs to be constructed from high quality materials because of the corrosiveness of ozone⁷⁴. Because of its toxicity for people, extensive safety precautions also need to be taken⁷⁵. In practice, the use of ozone is mostly limited to large installations.

⁶⁹ United States Environmental Protection Agency, *Alternative disinfectants and oxidants guidance manual*, April 1999, Chapter 3 Ozone.

⁷⁰ Bühler, R.E., Staehelin, J. and Hoigné, J., Ozone decomposition in water studied by pulse radiolysis, *Journal of Physical Chemistry*, 88 (1984) 2560-2564.

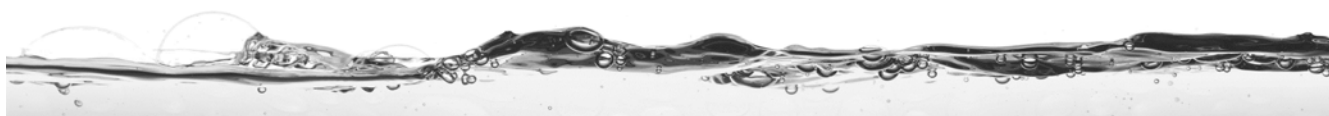
⁷¹ Staehelin, J. and Hoigné, J., Decomposition of ozone in water in the presence of organic solutes acting as promoters and inhibitors of radical chain reactions, *Environmental Science and Technology*, 19 (1985).

⁷² United States Environmental Protection Agency, *Alternative disinfectants and oxidants guidance manual*, April 1999, Chapter 9 Combined Disinfectants.

⁷³ Peys, K., Ozone, a molecule with many faces, *Chemistry Magazine* (2002) 4-10.

⁷⁴ Yang, B., Johnson, D.A., Shim, S.H., Effect of ozone on corrosion of metals used in cooling towers, *Corrosion*, 49 (1993) 499-513.

⁷⁵ EU Directive 2002/3/EC relating to ozone in ambient air, 12 February 2002.



3.6.2.5. Copper-silver ionisation

Heavy metals, such as copper and silver ions are known bactericides. The positively charged ions bind to the negatively charged cell wall of micro-organisms and in this way hinder the transportation of nutrients to the cell. In combination with the degradation of cell proteins micro-organisms are killed.⁷⁶. The Cu/Ag method is for example effective against *Legionella*, but only in a limited pH region. The ions themselves remain in the water for a long time and provide for a long residual effect.

A flow cell that contains electrodes consisting of a copper/silver alloy introduces copper and silver ions (Cu^{2+} en Ag^+) into the water by applying a current between the electrodes (ionisation). Copper ions are systematically released in higher concentrations (300 to 500 ppb) than the silver ions (30 to 50 ppb)⁷⁷.

Advantages of the method are the efficiency of the method in the whole pipe system (also dead points), the relatively low cost and the easy maintenance. In contrast the Cu^{2+} and Ag^+ concentrations are strongly influenced by the hardness and the pH of the water. It is mainly the formation of scale on the electrodes and the precipitation of silver (when the water has a high chloride content) that drastically reduce the efficiency of this technique. The copper/silver technique is also not able to break down or oxidise the biofilm in the network of pipes. In contrast to oxidising biocides it is also not possible to break down organic material by using this technique. The method is therefore not used in swimming pool water treatment.

A point of discussion regarding this method is the environmental and health aspects related to the heavy metal silver and copper ions. These are introduced into the environment and can be harmful to health. Especially the long-term effects on fauna and flora are not yet sufficiently known (especially for silver)^{78/79}. This technology can also not be used in pipes made from steel or galvanised steel because of significant corrosion problems.

⁷⁶ Lin, Y.-S. E., Vidic, R.D., Stout, J.E. and Yu, V.L., Individual and combined effects of copper and silver ions on inactivation of legionella pneumophila, *Water Research*, 30 (1996) 1905-1913.

⁷⁷ Disinfectants, copper-silver ionisation, <http://www.lenntech.com/water-disinfection/disinfectants-copper-silver-ionization.htm>.

⁷⁸ Agency for Toxic Substances and Disease Registry, *Toxicological Profile for silver*, US Public Health Service, 1990.

⁷⁹ Howe, P.D. and Dobson, S., Eds., *Concise International Chemical Assessment Document 44 - Silver and silver Compounds: Environmental aspects*, World Health Organisation, 2002.



3.6.2.6 Thermal treatment

Micro-organisms can only survive in a specific temperature range. Heating up the water can kill micro-organisms. *Legionella* bacteria for example are killed at temperatures higher than 60 °C⁸⁰.

During a thermal disinfection treatment the water is heated up to at least 60 °C in the whole installation. This can only be done periodically and is in practice only achievable on the hot water circuit (sometimes after necessary adaptations). For the treatment to be effective, the water temperature of 60 °C must be reached at all tapping points for at least 20 minutes (or 5 minutes at a water temperature of 70 °C). It is also important that a temperature of at least 60°C is measured at the outside of the piping material.

In practice it is impossible to achieve these temperatures in the complete hot water circuit without large investment costs in many cases. These increased temperatures also result in extra energy loss (Kyoto) and formation of scale. Continuously heating to 60 °C or higher is also not interesting from an energetic perspective and certainly has safety risks (burning). Finally, *Legionella* can also be found in the cold water circuit and this cannot be solved with thermal flushing.

3.6.2.7 Ultra-Violet (“UV”) irradiation

In UV disinfection, the water is irradiated with ultraviolet light with a wavelength of around 254 nanometres. This UV light damages the hereditary material of the micro-organisms. This means they cannot produce new cell material and so they die⁸¹.

UV radiation should always operate on a continuous basis. Switching the lamps on and off greatly reduces their lifetime. This means that a minimum flow of water running through the equipment is always necessary. Systems in which periodically no water is discharged therefore need to have their water recirculated.

Because UV only disinfects the water that is directly radiated, the whole water flow must be treated. In theory, UV must be set up in such a way that every tapping point can offer the same guarantee to the user. In practice, UV disinfection is combined with a method that maintains a residual disinfection in the water.

⁸⁰ Kim, B.R., Anderson, J.E., Mueller, S.A., Gaines, W.A. and Kendall, A.M., Literature review – efficacy of various disinfectants against *Legionella* in water systems, *Water Research*, 36 (2002) 4433-4444.

⁸¹ United States Environmental Protection Agency, *Alternative disinfectants and oxidants guidance manual*, April 1999, Chapter 8 Ultraviolet Radiation.



3.6.2.8 Salt electrolysis

In principle salt electrolysis systems are nothing more than *on-site* chlorine generators. In comparison with the classic chlorine dosing, transportation and storage of chlorine gas or sodium hypochlorite solutions are avoided.

A salt electrolysis system consists of an electrolysis cell through which a concentrated salt solution flows. An electric current is applied between permanent electrodes located in the cell and chlorine gas is generated from the dissolved salt. A distinction between two types of systems can be made depending on whether the chlorine gas is produced in the water itself or in a separate circuit. In both cases the salt consumption can be substantial.

In the first type of systems, the salt (NaCl) is added directly to the water and then passed through the electrolysis cell. Hydrogen gas is produced as a by-product during the electrolysis, which means good ventilation is required.

In the second type of systems, the disinfectants are not formed in the water itself, but in a separate circuit. Salt is dissolved in softened water in a separate reservoir, until a saturated solution (“brine”) is achieved. This solution is thinned with softened water and led to a membrane electrolysis cell. Besides chlorine gas, hydrogen gas and lye are formed as by-products.

The chlorine gas can be added to the water in two ways: directly or after being mixed with the formed lye. Mixing chlorine and lye results in a solution of sodium hypochlorite that can easily be mixed with the water. Sometimes the solution is also stored in a buffer tank, from where it can be added with a pump during peak flow. The formed hydrogen gas also needs to be ventilated into the open air.

The disinfecting action of the salt electrolysis technique is based on that of dosing hypochlorite. Salt electrolysis is therefore not included further in the discussion. If there are differences with the addition of NaOCl or chlorine, they are stated.

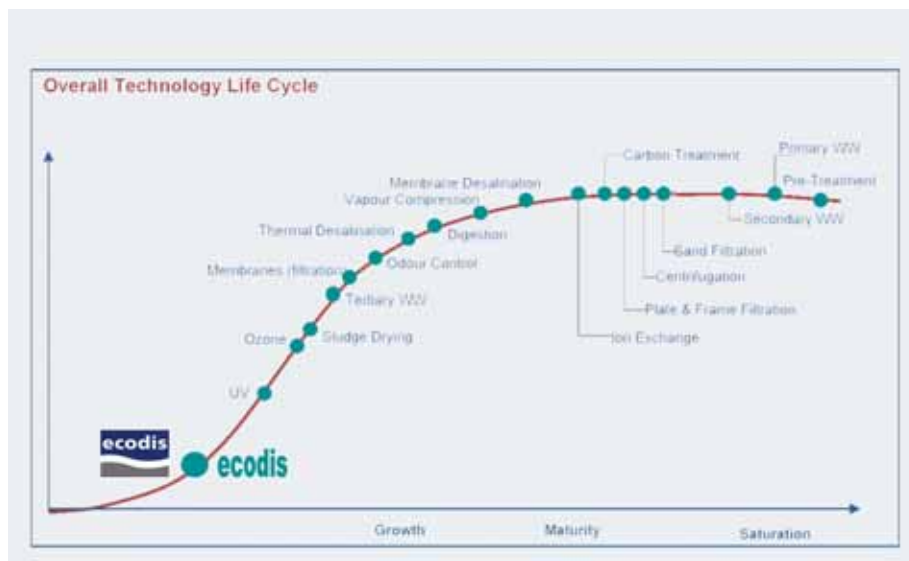
Despite the fact that salt electrolysis is an established technique, it is linked to many disadvantages: necessary pH correction in the first type of systems as described above, increased corrosion through leakage of salt, safety problems related to chlorine gas and hydrogen gas, considerable salt consumption for large flows, etc.



3.6.3. Comparison of disinfection methods

Ecodis has used the available scientific publications to make a comparative study of the current disinfection methods⁸². This has shown the unique positioning of the *ecodis*[®] technology. It should be noted that in comparison with the other disinfection and purification techniques, the *ecodis*[®] technology is still a fairly recent (and so far only limitedly known) technology with an enormous growth potential.

Technological lifecycle of water treatment techniques

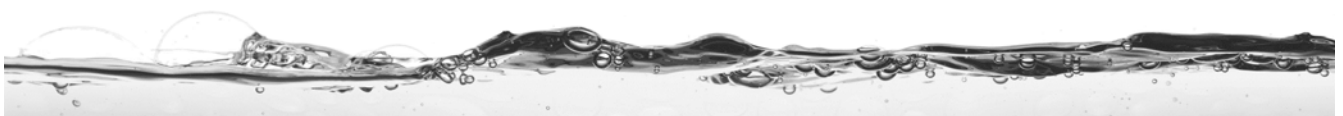


Source: Frost & Sullivan⁸³ and Ecodis

The comparison criteria are now looked at briefly after which the various techniques are compared with each other in the form of a table on the basis of key words. Finally there is an explanation of the information in the table.

⁸² It should be emphasised that this comparison does not apply universally because of the accessibility of a method can vary greatly from case to case, from water composition to water composition.

⁸³ Frost & Sullivan, 2004. Report: "European Water Treatment Market Overview-The shape of Opportunities". This report can only be purchased and hence cannot be consulted (in full) on-line. De website of Frost & Sullivan is: www.frost.com.



3.6.3.1. Comparison criteria

In the first instance the characteristics of the different disinfection methods are compared with one another by means of four criteria:

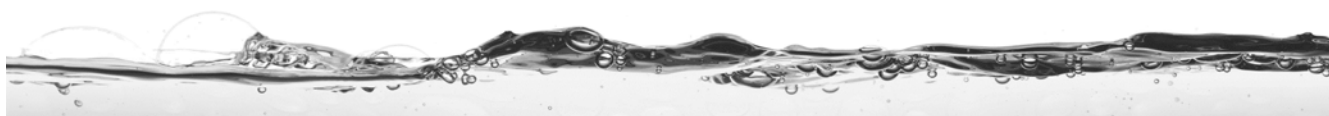
- (1) the disinfecting action: which agent or agents are responsible for the disinfection;
- (2) the residual effect: does the method only result in the immediate killing of the micro-organisms or does it also have a residual effect by which the treated water remains germfree for a certain period;
- (3) the continuity: can the treatment only be employed periodically (discontinuously) or can the water be treated on a continuous basis;
- (4) the usability: can only the entire water flow be treated or can it also be used in bypass.

Next the performance of the technologies is compared on the basis of:

- (5) the biocidal effect (killing of micro-organisms): what types of micro-organisms are killed by the method and how fast does this happen;
- (6) the capacity for biofilm removal: is the method capable of removing biofilm and does this happens completely or only partially;
- (7) the quality requirements of the water: is the disinfection method limited by particular characteristics of the water to be treated;
- (8) the pH-dependence of the method: can the technology only be applied in a particular defined pH region or is it pH-independent;
- (9) the formation of AOC: does the technology lead to an increase in the AOC content (“*Assimilable Organic Carbon*”) of the water and introduces as such additional nutrients for micro-organisms;
- (10) the causing of corrosion and/or deposits: does the method lead to increased corrosion or deposition of material; corrosion is here considered in general and not specific for different construction materials; the issue of deposits concerns primarily the issue of the formation of scale.
- (11) the energy requirements: is the method energy-intensive or merely characterised by low energy consumption.

The environmental impact of the technologies is more and more becoming an important selection criterion. The methods of disinfection are here compared on the basis of:

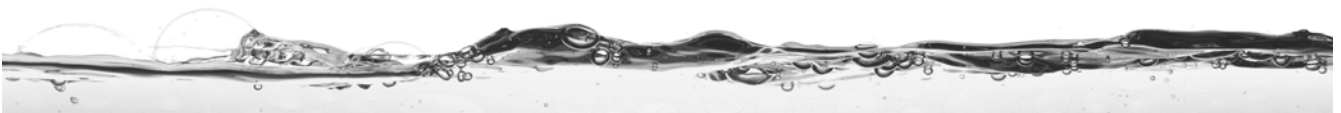
- (12) the formation of DBPs (“*Disinfection By-Products*”): are harmful compounds formed in side reactions of the disinfection and, if so, which;
- (13) odour and taste problems: are odour and/or taste problems regularly found after treatment with the respective method in question;



(14) the environmental impact: what impact the method has on the environment. This includes the different forms of waste, such as high CO₂ emissions (goes together with the energy requirements), the release of products harmful to the environment, etc.;

(15) their safety: how safe are the methods for the operators and water users.

Finally there is the issue of monitoring, the maintenance and the reliability in the operation of the different methods (16) and specific disadvantages inherent to the methods discussed.



3.6.3.2. Summary table

		Chemical methods						Physical methods		ecodis®
			Chlorine dioxide (ClO ₂)	Ozone (O ₃)	Hydrogen peroxide (H ₂ O ₂)	Cu/Ag		Thermal	UV	
1	Disinfecting activity	HOCl / OCl ⁻	ClO ₂	O ₃ Oxygen radicals	H ₂ O ₂ Oxygen radicals	Cu ²⁺ and Ag ⁺ ions		By heat (> 60°C)	By irradiation with UV light	Free chlorine Chlorine- and oxygen radicals
2	Residual effect	Yes	Yes	Very limited - none	Very limited	Only by Cu ²⁺ and Ag ⁺ ions in the biofilm		No	No	Extensive
3	Continuity	Continuous for high flows Discontinuously in decontamination	Continuous for high flows	Continuous	Discontinuously only in cleaning	Continuous		Discontinuously	Continuous	Continuous/ Discontinuously
4	Usability	Main flow or partial flow Low flows not possible	Main flow Low flows not possible	Main flow Low flows not possible	Main flow Low flows not possible	Main flow		Only in hot water circuit	Only in main flow or directly at the tapping points permanent flow of water required	Main flow or in bypass, or directly at the tapping points

		Chemical methods					Physical methods			ecodis®
		Chlorine (NaOCl) or Salt electrolysis	Chlorine dioxide (ClO ₂)	Ozone (O ₃)	Hydrogen peroxide (H ₂ O ₂)	Cu/Ag	Thermal	UV		
5	Biocidal effect	Effect after contact time Killing of bacteria, not inactivating viruses	Effect after contact time Killing of bacteria and viruses	Very fast effect, very oxidizing, killing of bacteria, viruses, ...	Fast effect with high concentrations	Effect after infiltration of the biofilm, non-oxidizing	Effect in function of the temperature Killing of bacteria	Fast effect Killing of bacteria, not inactivating viruses	Fast effect, complete killing after passage by the cell, killing of bacteria and viruses, oxidizing	
6	Biofilm removal	Limited effect only at high concentrations	No removal of organic material	No effect	Very limited effect Only at high concentrations	No effect, not oxidizing	Only with long contact times	No effect, only direct disinfection at the lamp	Entire removal prevention of new colonisation	
7	Quality requirements of the water	Low content of oxidizable matter	Low content of oxidizable matter	Low content of oxidizable matter	Low content of oxidizable matter	Low TDS, chloride and nitrate concentrations, problems with calcareous water	Problems with calcareous water, problems with corrosive water	None. Turbidity or colour, problem with calcareous water	Low content of oxidizable matter, problem with calcareous water	
8	pH-dependence	Strongly pH-dependent	pH-independent between 5-10	Strongly pH-dependent	pH-independent	pH-dependent	None	None	Limited pH-dependence	

		Chemical methods						Physical methods		ecodis®
		Chlorine (NaOCl) or Salt electrolysis	Chlorine dioxide (ClO ₂)	Ozone (O ₃)	Hydrogen peroxide (H ₂ O ₂)	Cu/Ag	Thermal	UV		
9	AOC formation	Increase in AOC	Not known	Strong increase in AOC	Not known	No data available	No data available	No	No effect	No effect
10	Corrosion & deposits	Corrosive due to increased chloride content, attacks rubber seals, chlorine fumes corrode electrical contacts	Corrosive, attacks rubber seals	Very corrosive.	Corrosive at high concentrations, Attacks rubber seals	Very corrosive on steel and galvanised steel	Increased calcium deposits Increased speed of corrosion (direct and indirect effects)	None	No corrosion	No corrosion
11	Energy requirements	Low energy consumption	Low energy consumption	Very energy-intensive	Low energy consumption	Very low energy consumption	Very energy-intensive	High energy consumption	Very low energy consumption	Very low energy consumption
12	Formation of DBP	THM formation	Chlorite formation limits to the maximum treatment levels	Bromate in bromide-containing water, residual ozone in the water is toxic	No	Too high silver levels are toxic	No	No	THM to a very limited extent	THM to a very limited extent
13	Odour- or taste problems	Possible from a level of 0.3 mg/litre	Possible	Possible at high concentrations	Possible at high levels	Bitter taste at certain levels	Musty taste	None	None at the usual concentrations	None at the usual concentrations

		Chemical methods						Physical methods		ecodis®
		Chlorine (NaOCl) or Salt electrolysis	Chlorine dioxide (ClO ₂)	Ozone (O ₃)	Hydrogen peroxide (H ₂ O ₂)	Cu/Ag	Thermal	UV		
17	Specific disadvantages	Stability NaOCl, raises the pH and consequently less efficient	Stability ClO ₂ Danger of explosion with on- site generation	Difficult to maintain concentration throughout the system	Very high amounts required, stability H ₂ O ₂ in water	Long term effects on health insufficiently known Development of Ag ⁺ - resistance possible	Structural adjustments frequently required Large chance on fast re- contamination	Regeneration micro- organisms possible	In circulation limited development of gas, to be removed via ventilation	

3.6.3.3 Explanation

The above-mentioned comparison table clearly shows that the *ecodis*[®] technology offers great advantages compared with the other methods. All criteria considered, there are only a few technologies that can present the equal performance of the *ecodis*[®].

The most important comparison criteria are discussed in the following sections in more detail.

Residual effect (2)

UV irradiation and thermal disinfection only act directly and the residual activity of ozone is limited. After the incoming water has passed through the disinfection installation, it usually stays for a long period in the network of pipes before it is consumed at a tapping point. Re-contamination of the downstream pipework is very realistic (e.g. from the biofilm). In the case of UV irradiation, there is a reasonable chance that bacteria pass UV tubes unaffected if the water is cloudy (this can be temporarily due to for example flushing in the network). For this reason, these three methods are usually combined with a method that does provide a residual disinfection such as adding chloramines, chlorine or chlorine dioxide.

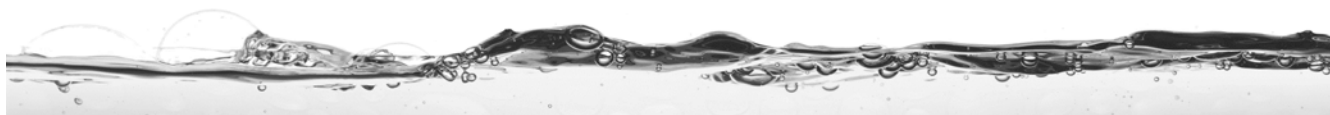
The *ecodis*[®] does not only have an immediate disinfection effect but also a pronounced residual effect by which re-contamination is prevented. Other methods that provide residual activity are chlorine, chlorine dioxide and copper/silver. Copper/silver is however not oxidizing.

Continuity (3)

Disinfection by thermal treatment can only take place periodically and is very time-consuming. The method is limited to the hot water circuit and in some of the installations structural adjustments need to be made first. In practice, the required temperatures can often not be achieved in older installations. During the thermal treatment the entire installation must be taken out of use.

As stated, the maximum treatment level of chlorine dioxide is limited because of the formation of the harmful by-products chlorite and chlorate. For this reason chlorine dioxide is only added periodically in most applications. In this case a high concentration of ClO₂ is added to the water, which needs a few hours of contact time to be effective. The treatment must be repeated on a regular basis. During the treatment the water system can not be used for drinking water purposes and it should be thoroughly rinsed afterwards with clean water. Likewise hydrogen peroxide is only used in practice in a discontinuous regime due to the high risks of corrosion, rubber fatigue and the toxicity of the residual substances.

Just like chlorine and copper/silver ionisation *ecodis*[®] can be used both continuously and periodically. At low water flows only UV and *ecodis*[®] are usable. UV irradiation should always



operate on a continuous basis. Switching the tubes on and off reduces their lifetime considerably. This means that a minimum water flow is always required to run through the equipment. Therefore the water will have to be recirculated in systems in which periodically no water is withdrawn.

Usability (4)

Disinfection by UV irradiation requires that the entire water flow is treated: only water that is directly irradiated, will be disinfected. Copper/silver ionisation is usually also used in the main flow. As discussed, in thermal treatment the entire hot water installation should be heated.

The *ecodis*[®] system can be applied both in the main flow and in bypass. Advantages of bypass treatment are that the installation can be smaller dimensioned, consequently the installation can be more easily integrated, possible pre-treatment of the water is limited to a part of the water flow (e.g. softening) and maintenance becomes more straightforward. As a result bypass treatment is more economical.

As stated earlier, for low flows only the *ecodis*[®] and UV tubes are suitable solutions. UV tubes cannot be employed however in applications in which water is taken intermittently due to the high wear on the tubes.

Biocidal effect (5) and Biofilm removal (6)

In the amounts that can be used (+/- 0.3 to 0.5 mg/l) NaOCl is limited in dealing with biofilm. Treatment levels (dependent on the water quality) of NaOCl increase the initial biofilm formation capacity of the water. At the same time the development of the existing biofilm will be stimulated because only the top layer of the biofilm comes in contact with chlorine. In this process extra AOC (see below) is formed which stimulates the development of biofilm in the deeper layers⁸⁴. The same holds for ozone: it is not capable of completely removing biofilm and its use also provokes a clear increase in the capacity for biofilm formation.

At the required temperatures and contact times (days) the thermal method probably has the effect of removing biofilm. A KIWA report states: “*The thermal inactivation also reaches Legionella in amoebic films and biofilms and both inactivates and removes biofilm, so that re-*

⁸⁴ Polanska, M., De Winter, C., Huysman, K., Van Keer, C., *Evaluation of nutrients limiting bacterial regrowth and biofilm formation in drinking water distribution system*, Samenwerking Vlaams Water (SVW), 2004.



growth of bacteria, including Legionella, is delayed. A practical study showed that the favourable action is very short-lived.”⁸⁵.

UV irradiation is effective against micro-organisms present in the incoming (possibly recirculating) water. UV radiation has however no effect whatsoever on micro-organisms in the biofilm, or on biofilm formation and for this reason offers no protection further along the (outlying branches of the) installation.

Copper/silver ionisation has only a limited effect on the removal of biofilm. Living micro-organisms in the film are killed, but the biofilm itself is not decomposed.

So far it is not known whether the continuous addition of chlorine dioxide to the maximum level of 0.2 mg/l (limited due to exceeding the chlorite concentration) has an effect on the destruction of the biofilm⁸⁶. Chlorine dioxide must primarily be seen as a decontamination measure in which intermittently, high concentrations of chlorine dioxide are applied. The effect on the biofilm must then be evaluated, depending on the situation.

The *ecodis*[®] system not only prevents the formation of biofilm, but also removes the existing biofilm, as has been verified by some practical investigations performed by PIDPA⁸⁷.

Quality requirements of the water (7)

The effectiveness of some of the disinfection methods sometimes strongly depends on the composition of the water to be treated.

A high content of oxidizable matter leads for example to reduced efficiency of chlorine, ozone, hydrogen peroxide and *ecodis*[®]. High concentrations of oxidizable compounds in the water consume a part of the disinfectant so that it is no longer available for killing micro-organisms. Chlorine dioxide reacts more selectively and is less sensitive to the presence of oxidizable compounds.

The performance of UV irradiation is negatively affected (as a result of more energy or a higher number of tubes necessary to reach a desired effect) by a high content of suspended material and a low UV transmission of the water (see also under residual effect). Thermal treatment gives problems with the formation of scale or corrosive water as will be explained further on.

⁸⁵ Beerendonk, E.F., Bluijs, P.J., van Genderen, J., van der Kooij, D., Medema, G.J., Nobel, P.J., Slaats, P.G.G., Voorhoeve, D.K., Alternatieve technieken voor *Legionella* preventie: kenmerken en beoordeling. KIWA report KOA 00.105 (2000).

⁸⁶ Gagnon, G.A., Rand, J.L., O’Leary, K.C., Rygel, A.C., Chauret, C., Andrews, R.C., Disinfectant efficacy of chlorite and chlorine dioxide in drinking water biofilms, *Water Research*, 39 (2005) 1809-1817.

⁸⁷ The effect of *ecodis*[®] on AOC and biofilm, Huysman, K., Pidpa (2003).



The presence of metal ions in the water, such as iron ions, lead to a fast decomposition of hydrogen peroxide.

A number of factors determine the availability of copper and silver ions in the water and thus the efficiency of the method. A high chloride content in the water will lead to precipitation of silver chloride, strongly reducing the concentration of available silver ions. The availability of Cu^{2+} ions is strongly influenced by the pH: at pH values higher than 6 insoluble copper complexes will be formed and the concentration of free copper ions decreases.

pH dependence of the method (8)

The pH also contributes indirectly to a reduced efficiency of Cu/Ag ionisation. At higher pH scale will be deposited on the electrodes, reducing the efficiency.

Other methods that are strongly dependent on the pH are ozonisation and NaOCl dosing. Ozone is unstable in water, and decomposes according to a complex mechanism that is strongly pH dependent. A higher pH leads to a strongly increased decomposition rate, which greatly reduces the concentration of ozone available for disinfection.

The pH dependency of chlorine dosing is due to the acid-base equilibrium between HOCl and OCl^- . Only HOCl can diffuse through the bacterial cell wall and kill the bacteria in this way. Above a pH of 7.6 however, less than half of the “free chlorine” is present in the form of HOCl. At a pH of 8.6 this is even less than 10%. The efficiency of this method is thus very strongly dependent on the pH in the range in which the drinking water installations are situated. The pH value of the drinking water in Belgium and the Netherlands is mainly between 7.7 and 8.2.

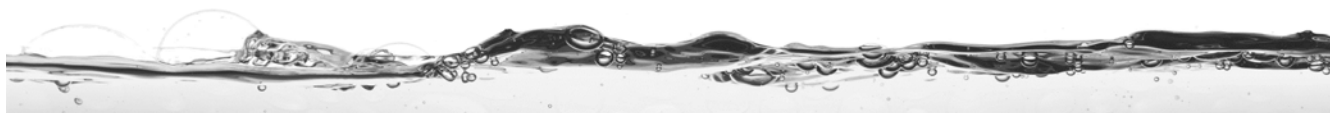
Thermal treatment, UV irradiation, peroxide treatment and chlorine dioxide treatment (between pH 5 and 10) are not or very little dependent on the pH.

AOC formation (9)

Because of the reaction of disinfectants with organic material or micro-organisms, it is possible that organic products are formed that can act as additional nutrients for organisms in the water or in biofilm (AOC). Even if the biofilm is only partially destroyed AOC can be formed, which stimulates the development of the biofilm in the deeper layers.

In standard chlorine disinfection, an increase in the AOC content is observed⁸⁸ as well as in ozone treatment⁸⁹. No information in scientific literature has been found about the effect of

⁸⁸ van der Kooij, D., van Lieverloo, J.H.M., Schellart, J. and Hiemstra, P., Maintaining quality without a residual disinfectant, *Journal AWWA*, 91 (1999) 55-64.



thermal disinfection, chlorine dioxide treatment, peroxide treatment or UV radiation on the AOC content.

Measurements by the drinking water company PIDPA show that the AOC concentration in the water at sampling points immediately before and after *ecodis*[®] remains the same or drops slightly. In other words the initial capacity for biofilm formation of the water is not increased by the use of *ecodis*[®]. The study, in which the effect of *ecodis*[®] was tested on the development of biofilm, confirmed that in addition to the killing of living material in the biofilm, the biofilm was also completely or partially removed.

Corrosion and deposits (10)

Chlorination is often responsible for corrosion in the network of pipes and of materials in areas where chlorine fumes can be released and where there is insufficient ventilation. If pipes made from copper or galvanised steel are used, the speed of corrosion increases strongly at higher concentrations and higher temperatures. Especially in older installations, it is not always possible to use NaOCl treatment. The same holds for chlorine dioxide whenever high doses are applied. In combination with atmospheric humidity, chlorine dioxide is however more corrosive than chlorine gas.

Whenever air is used in the production of ozone, nitrogen oxides form as unwanted by-products. These react with water and form nitric acid, which is very corrosive⁹⁰.

Hydrogen peroxide itself is not corrosive, but indirectly corrosion can result from an increase in the oxygen content of the water.

It is a well-known fact that corrosion is accelerated with increasing temperature. In thermal disinfection the water temperature reaches between 50 and 70°C, doubling the speed of corrosion. The increased temperature also causes increased scale deposition in the entire network of pipes. The higher the temperature, the more pronounced the deposition is. If the water is softened in advance, the effect could remain limited. Softening by means of an ion exchanger without additional pH correction frequently results in corrosive water, because of which the pipes can be attacked. Next to an increased contact-surface for bacteria on one hand, heat conductivity is also reduced. As a consequence it takes much longer before the required temperatures are reached in the whole system.

⁸⁹ van der Kooij, D., Hijnen, W.A.M. and Kruithof, J.C., The effects of ozonation, biological filtration and distribution on the concentration of easily assimilable organic carbon (AOC) in drinking water, *Ozone Science and Engineering*, 11 (1989) 297-311.

⁹⁰ Kaiga, N., Takase, O., Todo, Y. and Yamanashi, I., Corrosion resistance of ozone generator electrode, *Ozone Science and Engineering*, 19 (1997) 169-178.



Application of the Cu/Ag ionisation technique increases the corrosion rates very much when used in pipes made of galvanised steel, steel or even stainless steel.

It appears from a recently performed corrosion study, performed by an external corrosion expert, that the use of *ecodis*® does not increase the speed of corrosion of galvanised steel, copper or stainless steel⁹¹. In the *ecodis*® system increased scale formation could increase locally depending on the composition of the water.

UV irradiation does not cause any corrosion problems or deposits.

Energy requirements (11)

With regard to energy consumption Cu/Ag ionisation and the *ecodis*® system (typically 8 A, 7 V per m³/h treated water) are comparably low. On the other hand, the use of ozone and UV as a disinfection technique is very expensive because of the high energy consumption. The operational costs (electricity) for the production of ozone and the efficient mixing of the ozone gas with water are very high.

Treatment with NaOCl or H₂O₂ only requires the energy of a dosing pump. However, it should be taken into account that chlorine is produced by electrolysis. So there is in fact an additional cost for the production of hypochlorite solutions and distribution (transport costs).

Chlorine dioxide is much more expensive than chlorine, but its efficiency is much higher.

The discontinuous thermal method is both heat and water consuming. In order to achieve a temperature of 60 to 70°C at all tapping points and to maintain it for a sufficiently long time, a sufficiently high water flow is required. Extra scale deposits result in a reduced heat transfer so that in time additional measures are required (cleaning the pipes with an acid resulting in an increased risk of corrosion and leaks). Scale deposits also reduce the useful diameter of the pipes and increase the contact surface and the roughness of the pipe-material, which also contributes to the growth of biofilm⁹².

Formation of DBP (12)

Formation of harmful disinfection by-products is an important problem for some technologies. The formation of halogenated organic compounds, including trihalomethanes (THM), is a problem in chlorine treatment and using the *ecodis*®. The formation of THM however, is much

⁹¹ Corrosion study on copper, galvanised steel and stainless steel in tap water with and without the use of “*ecodis*®”, Corrosion Protection Consultants, 2001.

⁹² van der Kooij, D., Veenendaal, H., Scheffer, W., Biofilmvorming en groei van *Legionella* op leidingmaterialen in een experimentele warmtapwaterinstallatie, *H₂O*, 11 (2003) 19-21.



lower for the *ecodis*⁹³ system, as has been demonstrated in an investigation by PIDPA⁹³. Reasons for this are the suppression of the formation of chlorine gas at the electrodes and the fact that for the same disinfecting effect a lower concentration can be applied compared with chlorine. In disinfection with the *ecodis*[®] the THM content remains in any case far below the most stringent European drinking water standard.

In chlorine dioxide treatment the degradation product chlorite is produced, for which a MAC value (Maximum Allowable Concentration) has been set of 0.2 mg/l in continuous application. Due to the formation of chlorite the maximum chlorine dioxide content in continuous use is limited to 0.2 mg/l, which -in most cases- is insufficient to reach the required killing effect.

No harmful by-products are formed in UV irradiation and thermal disinfection. When ozone is used, problems only arise if the water contains bromide ions. Ozone quickly oxidises the bromide ions to bromate, which is carcinogenic⁹⁴.

Odour and taste problems (13)

When chlorine is used odour and taste problems may occur. Problems can also occur when using chlorine dioxide, albeit less frequently⁹⁵.

For the typical concentrations of free oxidising agents generated by the *ecodis*[®] system, no odour or taste problems are observed.

Environmental impact (14)

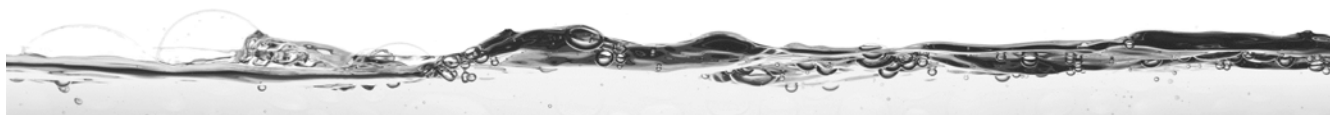
Chemical disinfection methods have the disadvantage that waste is produced by residual chemicals. Chemicals can also find their way into the environment by leaks in storage tanks or pipes. Since mostly dilute solutions are used because of stability problems of the chemicals (NaOCl, H₂O₂) transport costs also have a share in the overall environmental impact.

Specific for the use of ozone is the treatment of the residual gas that remains after mixing with the water to be treated. This residual gas always contains residual ozone and for this reason requires further treatment. In addition ozonisation is also very energy-intensive.

⁹³ Research on the production of halogenated compounds with *ecodis*[®], PIDPA report dd 12/2005.

⁹⁴ von Gunten, U., Ozonation of drinking water: Part II. Disinfection and by-product formation in presence of bromide, iodide or chlorine, *Water Research*, 37 (2003) 1443-1467.

⁹⁵ Schmidt, W., Using Chlorine Dioxide for Drinking Water Disinfection by the Application of the Chlorite/Chlorine Process, *Acta hydrochim. Hydrobiol.*, 32 (2004) 48-60.



As already stated, thermal disinfection also devours energy and causes increased emissions of the greenhouse gas CO₂ (Kyoto). A lot of energy is required to heaten the water and maintain the temperature in the network of pipes.

Environmental and health problems are associated with copper/silver ionisation because copper and silver ions are heavy metals and show up in the environment. These ions not only have an impact on the aquatic environment but also on human health⁹⁶. For this reason standards have been set defining maximum concentrations in drinking water. However, long-term effects on the health are at this moment insufficiently known, particularly for silver ions. In Germany the technique is not allowed. In other European countries, including Belgium and the Netherlands, no decisions have been taken yet.

The environmental impact of UV disinfection and the *ecodis*[®] system are limited to the periodic replacement of respectively the UV tubes and electrodes. UV tubes have a typical lifetime of 7000 hours and generally need to be replaced annually. The electrodes in the *ecodis*[®] have a typical lifetime of 2 to 3 years.

Safety (15)

The use of hypochlorite solutions increases the chance of accidents caused by a too high dosage. In swimming baths accidents that can be attributed to an excess of chlorine, combined with the addition of an acid have happened several times. Furthermore there is undisputedly a cost to society in the use of NaOCl by spills and splattering by which clothes and materials can be bleached and the skin can get irritated.

The storage of chemicals also requires the necessary expertise. Hypochlorite solutions may not come into contact with acid (which is for example used in the removal of scale) because corrosive chlorine gas may escape which is extremely harmful to human health (in WW I chlorine gas was used as a poison gas by the German army). The area in which it is dosed and the storage area must in any case be sufficiently ventilated⁹⁷. Furthermore there are extra environmental costs for the removal and cleaning of the chlorine residues in storage tanks.

Chlorine dioxide is supplied as a gas or can be manufactured on-site. In both cases expertise, knowledge and severe safety precautions are necessary when handling the product. Chlorine dioxide is after all a highly explosive gas and very poisonous^{98/99}. It is recommended to

⁹⁶ Donohue, J., Ed., *Copper in Drinking-water, Background document for development of WHO Guidelines for Drinking-water Quality*, World Health Organisation, 2004.

⁹⁷ International Chemical Safety Cards 0126: Chlorine, <http://www.inchem.org/documents/icsc/icsc/eics0126.htm>.

⁹⁸ Dobson, S., and Cary, R., Eds., *Concise International Chemical Assessment Document 37 – Chlorine Dioxide (gas)*, World Health Organisation, 2002.



ventilate the production area. Because of this, the management and investment costs are also higher.

Likewise ozone is a very poisonous gas and the necessary safety precautions for working with gases must be strictly followed. Special attention must be paid to the efficient operation of the destruction units for the residual gas. In large installations liquid oxygen is frequently used for the production of ozone and additional safety measures should be taken with regard to the danger of explosion.

For hydrogen peroxide the safety threats are limited to those of storing and handling of the chemicals. Spills and splattering also bleach material and cause skin irritation.

The thermal method increases the risk of burning when carrying out the necessary procedures. Regulating valves and mixing taps can also get blocked by scale deposits and must then be opened or closed manually.

A great advantage of the *ecodis*[®] system is the fact that the disinfecting compounds are formed *in statu nascendi* (generated from compounds present in natural water). As a consequence, their distribution is much more homogeneous in comparison with chlorine, so local overdosing (and the resulting formation of by-products) is impossible and very high concentrations (such as in NaOCl) cannot be achieved. There is a limited electrolysis of water with formation of low concentrations of hydrogen gas, that in a closed system must be removed via appropriate ventilation. A low voltage current flows between the electrodes in the *ecodis*[®] cell which contains no safety risks whatsoever for the operators involved.

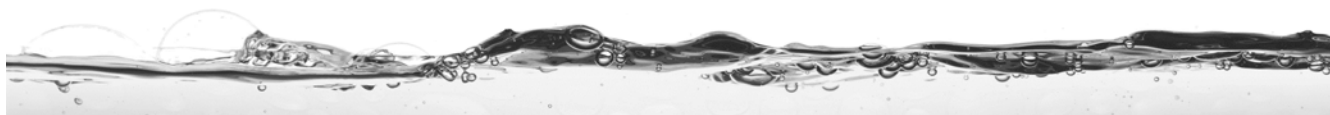
Copper/silver ionisation is a very safe technique for which no specific safety precautions have to be taken. The electrical current is a direct current at a low voltage without any danger of electrocution.

Monitoring, maintenance and reliability (16)

When NaOCl is dosed the installation can be monitored continuously by measuring the free chlorine. A knowledge of chemistry and a correct understanding of chemicals are required. In addition to the usual operational costs (chemicals, man hours) extra safety and maintenance costs must be brought into account. If the treatment is temporarily interrupted there is clearly an increased risk of biological contamination.

When chlorine dioxide is used the installation can also be monitored continuously by measuring the chlorine dioxide and the treatment levels can be adjusted if required. Optimisation of

⁹⁹ International Chemical Safety Cards 0127: Chlorine dioxide,
<http://www.inchem.org/documents/icsc/icsc/eics0127.htm>.



systems for the *on-site* production of chlorine dioxide can however only be performed by specialists.

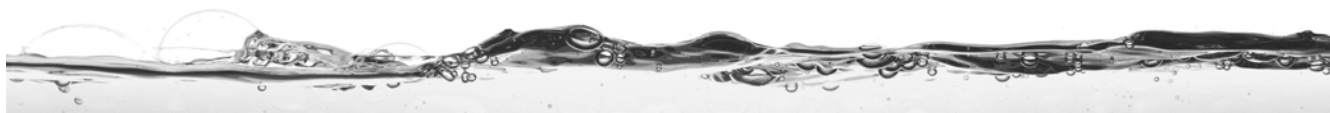
The thermal method, if not automated, is very labour intensive and requires much discipline and a clear management plan if the required contact times and the high temperatures are to be respected. If the method is not automated, manpower is necessary to run water through each tap for a sufficient period of time. If the boiler has insufficient capacity to treat all taps simultaneously, the treatment takes more time because each tap point must be flushed separately. In automated systems the risk exists that the regulating equipment will be blocked by the accumulated scale deposits with a danger of fire and highly increased maintenance costs as the result.

The maintenance of an ozone installation is limited but ozone generators have to be well maintained. Adjustment of the process is possible, but monitoring of the ozone concentrations is not straightforward.

UV disinfection requires relatively little maintenance. Very hard water can lead to scale deposits on the quartz tube of the lamp. To prevent the tubes from getting dirty they can be cleaned mechanically and automatically at regular intervals. The annual replacement of tubes needs also to be done manually.

Copper/silver ionisation is a maintenance-friendly technology. Very hard water can also lead to scale deposits on the electrodes and if so they should be cleaned. The electrodes need to be replaced periodically. An important disadvantage of the method is however the monitoring. The concentrations of Cu^{2+} and Ag^+ ions obtained in the water are so low that no straightforward, rapid and economical determination methods are available. This makes adjustment of the system impossible.

The *ecodis*[®] is generally regarded as the best technique for combating biological contamination, including *Legionella*. Continuous recording and adjustment are possible and if the system breaks down temporarily the risk of serious contamination is limited. At that moment, incoming bacteria are no longer killed, but because of the complete killing of the bacteria in the biofilm and the total removal of the biofilm, it takes a lot longer before a situation can develop in which problems can occur. The *ecodis*[®] system itself requires relatively little maintenance. In some types of water scale can be formed and needs to be removed. This has been anticipated in the design of the cell. The cell is easy to dismount and inspect, and connections have been provided to which a circulation pump can be attached. By circulating a dilute acid solution any scale deposits on the electrodes can be removed in a very short time (5 minutes).



3.6.3.4. Conclusion

From the preceding the following can be concluded:

The ecodis® has a combination of characteristics because of which it can generally be considered as a very complete disinfection technology that clearly anticipates new tendencies in legislation and public opinion.

The ecodis® technology is capable of physically removing the biofilm, contrary to the alternative water disinfection methods Ecodis is aware of. The ecodis® system is also the most sustainable method: no chemicals or salts are added to the water, the energy consumption is very low and the electrodes have a long lifetime.

3.7 **Fields of application**

3.7.1. General

In view of the broad spectrum of contamination and organic pollution the cell can treat, the great independence of local circumstances, the environmental and technical advantages with respect to the formation of by-products and energy consumption, the ability to be combined with other technologies and the economical potential of up-scaling and miniaturisation, the market opportunities for the *ecodis®* technology are obviously very extensive.

Consequently the fields of application can be examined according to different criteria on basis of which a large number market segments can be distinguished:

the type of water to be treated (suitable for the disinfection of drinking water, swimming pool water, cooling water, waste water, process water and groundwater);

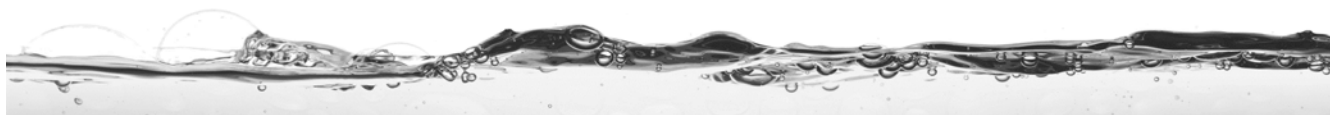
target user groups (consumers, public sector and industry); and

applications (industrial, recreational and others).

In the last few years, Ecodis has built up the required knowledge to tackle each segment of the market (with its own requirements and market factors) via the desired organisational structure (for example through vertical and/or horizontal integration).

Ecodis has a clear strategy whereby it focusses in the first phase on a limited number of these niche markets in which Ecodis already has a number of contacts. This is discussed in paragraph 3.7.2. 'Present focus of Ecodis'.

In paragraph 3.7.3. a number of important applications possibilities are summarized for which Ecodis currently has concrete plans for further development and in the medium-term commercialization. This list has been limited kept deliberately, but this does not rule out examining other opportunities.



The possible applications and product developments discussed hereafter in the *time-to-market* business plan adopted by Ecodis are illustrated at length in Chapter VI under 6.2 'Outlook 2007-2012'.

3.7.2. The present focus of Ecodis

The present focus of Ecodis will be further concentrated on the preventive disinfection of incoming water that is distributed to different tapping points within an organisation/institution through an internal system of pipes and this within the European guidelines in force.

Based on this focus, Ecodis will concentrate on two large segments of the water industry:

- the first field of application is situated in the disinfection of sanitary water mainly focussed on *Legionella* prevention for a wide range of possible clients, namely all institutions in which clients and/or personnel come into contact with water that is sprayed;
- other fields of application involve preventative action against all sorts of forms of bacterial contamination (including *Salmonella*, *E. coli*, *Listeria*), that must safeguard the users of *ecodis*® against large-scale contamination of products or problems during the production process as the result of this contamination.

In this view Ecodis is trying to complete the standardisation of the applications it has developed by the end of 2007 or the start of 2008.

3.7.2.1 Disinfection of incoming drinking-, mains or groundwater

The disinfection of incoming water within the drinking water standards is at present the main application of Ecodis. Incoming water may mean potable water or groundwater. The applications are focused on both the B2B and the B2C market. It concerns mainly the preventive disinfection of drinking water systems within the European guidelines in force.

The share of this application in the total turnover of Ecodis for the financial years 2004, 2005 and 2006 amounted respectively to 10%, 15% and 21%.

In addition to the (Flemish) food industry (already existing installations at Danone, Colruyt, Passendaele) Ecodis will also direct its sales focus towards other industrial sectors (pharmacy, cosmetics, chemistry, metal processing and electronics) in the years to come, first in the Benelux (2007) and afterwards abroad (the United Kingdom and France from 2009). In the medium-term Ecodis will also concentrate on the possibilities in the B2C market.



3.7.2.2 Disinfection of sanitary water in the context of *Legionella* prevention

This field of application fits within the legislation that is in force in most Member States of the EU regarding the prevention of *Legionella*. This has been presented in paragraph 2.2.3.2.

The share of this application in the total turnover of Ecodis for the financial years 2004, 2005 and 2006 amounted respectively to 84%, 81% and 72%.

Until recently the focus of Ecodis on this topic was to a more significant extent only concentrated on the social service sector and (to a more limited extent) the public sector (swimming pools and sports centres) in Flanders. In the years to come Ecodis will also bring within its action radius the many other possible applications in a broader range of clients (see 3.7.3.2 below) home and abroad.

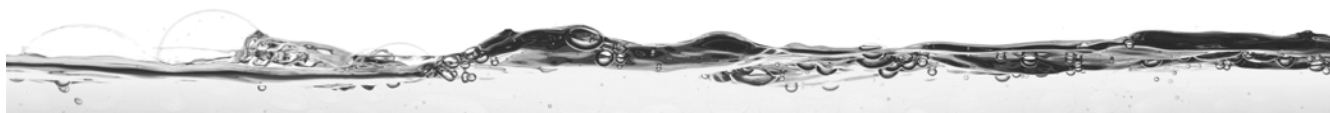
As described further below, the present Belgian *Legionella* legislation allows the application of thermal disinfection, and alternative methods are only allowed under specific conditions.

Thermal disinfection

Legionella can multiply rapidly in drinking water or hot water installations at temperatures between 20 and 55°C. Below 20°C *Legionella* grows at a slow pace or not at all, and above 55°C *Legionella* slowly dies. The optimum growth temperature is around 37°C, a temperature that is often found in water mixing installations, for example.

These growth characteristics are used in the thermal disinfection of the installation: by keeping the temperature of the water low or high enough, *Legionella* cannot multiply. This thermal disinfection goes alongside preventing the stagnation of water in pipes for a long time. If there is still the possibility of a risky situation or whenever contamination is encountered, the installation should be thermally disinfected. This implies that the installation will be flushed for a certain time with water at a defined temperature.

Disinfection temperature	Disinfection time
60°C	20 minutes
65°C	10 minutes
70°C	5 minutes



It is obvious that thermal disinfection will not be possible in drinking water installations (cold). For these installations it is important that the temperature does not rise above 25°C for longer than 1 to 2 days in a row and that the installation is used regularly. Because of this, treatment of a drinking water installation is often much more difficult.

Other disinfection methods

Besides thermal treatment, and the possibility of adding a single dose of chemical disinfectant for a thorough cleaning (which is not advised, see section 3.6), alternative methods exist.

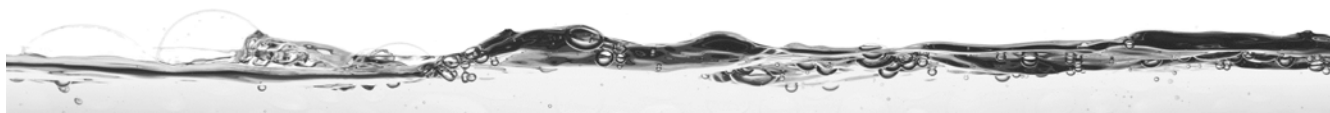
The present *Legionella* legislation provides that an alternative method is only allowed if this method is as efficient as thermal treatment and has no adverse consequences for people or environment. These methods are therefore considered to be alternative preventive methods. Many of these methods are available on the market at the moment, such as UV lamps or ultrafiltration (membrane technology), anodic oxidation and copper-silver ionisation. It should be noted that the continuous addition of a chemical disinfectant is different from dosing of a high concentration and is in principle not allowed.

At the moment *ecodis*[®] is regarded as equivalent to thermal disinfection. Recently, Ecodis has been the first company in the Netherlands to obtain a “declaration of no objection”. In Flanders and France Ecodis is in an advanced stage to receive the official certification. Other countries in Europe will quickly follow. An international expert committee on *Legionella* stated: “*The ecodis*[®] system has an activity that is comparable with the addition of chlorine however without an addition of external chemicals; the natural chlorides present in the water are converted to free chlorine in situ. The system is in this way safer for users and the environment and probably also better for our health.”

3.7.2.3 Possible applications for the preventive disinfection of drinking water installations

The following summary gives an overview of the large number of possible applications with respect to drinking water. This list is certainly not exhaustive.

- for keeping the drinking water distribution and sanitary installations germfree in:
 - hospitals: the entire drinking water network, washing facilities, showers, baths, etc.
 - rest and nursing homes: the entire drinking water network, washing facilities, showers, baths, etc.



- hotels: all incoming drinking water, all water for washing facilities, but also the water of the wellness departments of the hotel, etc.
- sports infrastructure: all incoming drinking water, water for shower facilities, etc.
- public buildings: all incoming drinking water, water for washing places, etc.
- schools: all incoming drinking water, water for sanitary, etc.
- child care and day-care centres: all incoming water, water for washing purposes, etc.
- camping and bungalow sites: all incoming water, water for washing places, water for the wellness centre, shower facilities, etc.
- recreation resorts: all incoming water, water for washing places, swimming water, water for the *wellness* department, etc.
- companies that provide shower areas, washing facilities, ... for their employees
- ships and aircrafts: drinking water storage tanks, shower areas, ballast water tanks, etc.
- *mobile homes* and caravans: drinking water storage tanks, shower water, etc.
- ...
- disinfection of emergency drinking water, in order to safeguard the microbial quality of emergency drinking water from tankers and to extend the storage-life of packaged emergency drinking water (such as already applied by the Antwerp drinking water company, PIDPA);
- keeping groundwater germfree after pre-treatment (e.g. filtration and/or removal of iron compounds and/or softening, ...) when it is used as a water supply for:
 - bottle rinsing machines, for rinsing the bottles on the in- and outside;
 - brewing water in breweries;
 - washing and rinsing of packaging that must be germfree before filling with the product;
 - industrial laundries (keeping the washing tunnels germfree without odour or taste problems or chlorine fumes when opening the washing chambers);
 - CIP (“*Cleaning-in-Place*”) and DIP (“*Disinfection-In-Place*”), principally in the food industry;
 - ...



- keeping treated rain water germfree for similar applications as previously described and in particular for use in agriculture and horticulture;
- keeping mains water germfree and inhibit the formation of biofilm and removing existing biofilm in the network of pipes;
- disinfection after water treatment with ion exchangers or membrane filtration, etc.
- prevention of “*biofouling*” on ultrafiltration, microfiltration, nanofiltration and reverse osmosis membranes. Biofouling is a contamination of biofilm on these membranes by which they slowly get clogged so that the flow of filtered water is reduced and as such the yield and the efficiency of the installation;
- preventive disinfection of air moisturizing systems and airco’s: vaporizing water in HVAC installations entails risks of *Legionella* and other forms of bacteriological contamination (“*building sickness*”);
- keeping drinking water germfree in potable water storage cellars;
- suppressing the growth of biofilms in the distribution network of public drinking water companies.

3.7.3. Applications that will be further developed by Ecodis

Ecodis has identified a number of application fields to develop. Below we discuss a few areas in which Ecodis will carry out further R&D in the near future.

3.7.3.1. Miniaturisation

Disinfection of water is required in many applications and the volumes of water to disinfect can vary considerably, going from a small private swimming pool to enormous volumes of cooling water in a flow-through system of an (electricity) power station.

However, when one deals with the disinfection of very small volumes of water with only a periodical consumption, only a few methods of disinfection can be used in practice. The addition of chemicals such as hypochlorite is not feasible. Very dilute solutions are used and dosing pumps for very low flow rates are hard to find, so even dosing is not feasible. Ozonation requires a too complex installation that is difficult to scale. Only UV tubes (without residual effect) and the *ecodis*[®] technology (with residual effect) can offer a solution here.

Ecodis possesses the necessary knowledge and expertise to develop installations that can cope with both higher volumes (*up-scaling*) and lower volumes (miniaturization).



The possibilities for “small” devices are very promising, both in the *B2B* and the *B2C* market. Possible applications include:

- disinfection cell for small water storage tanks (camping, mobile homes, private boats,...);
- disinfection cells for domestic use, built into small softeners;
- disinfection cells for soft drink dispensers;
- disinfection cells for ice cube machines;
- disinfection cells for small humidifiers;
- disinfection cells for dentists’ chairs;
- ...

Although Ecodis expects the first results by the end of 2007 the business plan does not anticipate any income from sales of products it has developed.

3.7.3.2. Swimming pools (to 200 m³ capacity)

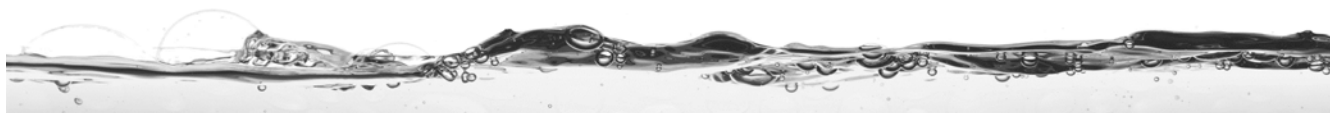
As long as one can remember the addition of chlorine has been the standard method for disinfecting for swimming pool water. In Belgium this method is regarded in Belgium as the "Best Available Technique" (“BAT”) for the disinfection of swimming pool water and is the only treatment allowed for public swimming baths.

Despite this status the search for alternative methods goes on. The most important reasons therefore are the dangers associated with dosing too low or too high and health aspects inherent to this method.

Adding an insufficient amount can lead to microbial contamination since insufficient disinfection, while adding too much can lead to danger to human health.

The addition of hypochlorite to water gives rise to the formation of many by-products that are possibly harmful to human health. In the presence of organic material and ammonia nitrogen (urea f.e.) in the water, chlorinated by-products can be formed by reaction with the hypochlorite, such as chloramines. Di- and especially trichloramine are suspected of having a harmful effect on human health. At the same time, the use of chlorine compounds leads to the formation of trihalomethanes, including chloroform.

At the moment a lot of health studies are performed on the effect of chlorination of swimming water on asthma and chlorine allergies. The severity of the effects is strongly influenced by the level and the duration of the exposure. The symptoms can vary from relatively unthreatening irritation complaints of the nose or hyperventilation to "*reactive airways dysfunction syndrome*"



(RADS), a form of occupational asthma that is associated with bronchial hyperreactivity lingering for a long time after the exposure incident.

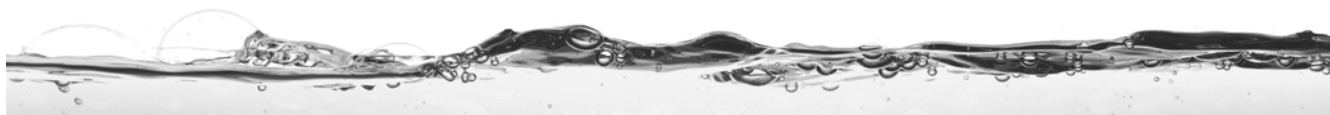
Recently a number of studies have appeared that describe the effects of lower chronic exposure to chlorine compounds among swimming pool personnel (Heederik et al.). In Belgium a study was performed in 2003 by Prof. Bernard of asthma and airways complaints on 1881 children from an urban and a rural area. The results were disquieting. Both an increase in asthma and increased lung permeability were observed on exposure to vapours after visiting chlorinated swimming baths. An investigation by Fantuzzi et al. (2001) indicated that the amount of time spent in a swimming pool correlates directly with an increased level of chloroform in the expired air and serum of swimmers. The concentration is directly proportional to the contact time in the water and the age of the swimmer.

In response to the number and variety of health complaints after visits to chlorinated swimming baths an advisory committee “Disinfection techniques for swimming water” was recently set up in the Netherlands by KIWA – at the request of the Ministry of VROM (*Housing, Regional development and the Environment*). The aim of this committee is to ensure the performance of an exploratory investigation into the present state of the art for cleaning of swimming and pool water (including alternatives to chlorine). Starting point is that the alternatives should offer an equivalent degree of health protection for the user as the present (prescribed) use of chlorine. In the future, the results of the investigation may possibly lead to a change in policy and amendment of the legislation, so that these no longer obstruct the replacement of chlorine consumption by alternative techniques.

The *ecodis*[®] system is an explicit candidate and appears on an informal list of 12 possible technologies for the permanent disinfection of swimming pool water. The danger of dosing the reagents too low or too high is excluded with *ecodis*[®] by the continuous monitoring and adjustment. In addition to this it has also already been demonstrated that *ecodis*[®] has a much lower potential for forming trihalomethanes (THM), an important class of chlorinated disinfection by-products (DBPs) that are harmful to human health. A further investigation will at the same time examine the impact of *ecodis*[®] on the formation of chloramines.

In addition to health aspects the use of hypochlorite also increases the risk of accidents. Effects caused by the acute exposure to chlorine or chlorine compounds, derived from disinfection installations, are described in a number of cases. They usually concern accidental exposure if the installation does not function correctly or during maintenance. Several times accidents have happened that can be ascribed to excessive addition of hypochlorite combined with the use of an acid to correct the pH of the water. Chlorine gas is formed by the acidification of hypochlorite and has a strongly irritating effect on the respiratory tract.

The focus of Ecodis in this topic will be on the treatment of swimming pool water of smaller swimming baths, Jacuzzis and whirlpools of private persons and medium-sized swimming



baths of sports and fitness centres. Income for this is included in the business plan from the end of 2007.

3.7.3.3. Cooling towers

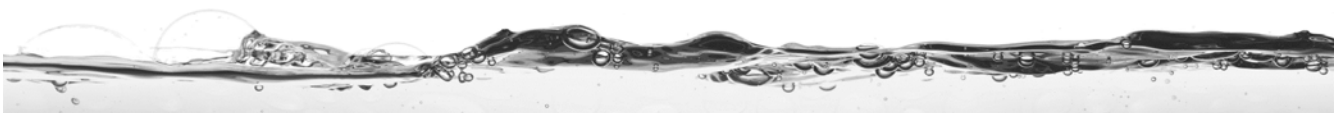
A cooling tower is an installation where heat is extracted from water by means of evaporation or conduction. In industry, water is used as a coolant for all sorts of processes. A distinction can be made between several types of cooling towers. There are towers in which the cooling water is only used once before it exchanges heat in the cooling tower before discharge. In addition there are cooling towers whose water is re-used for cooling. In these systems the water is circulated in the installations; from the process to be cooled to the cooling tower, where the water cools down, and back to the process. Usually the cooling water has a temperature of between 40 and 60°C. The water is pumped to the top of the cooling tower and then runs down again via plastic or wooden baffles. The water flow trickles over them. As the water falls down it exchanges heat with the rising current of air, which cools it by 10 to 20°C. Because a part of the water evaporates, it loses its heat. This water vapour can sometimes be seen in the form of clouds above the cooling tower. To provide an upwards flow of air, rotors are placed at the top of some cooling towers which can be compared with the blades of a ventilator. These screws suck the air in the cooling tower upwards. The water falls into a basin at the bottom of the tower and is recycled to the process to serve as a coolant.

Cooling tower systems can be open or closed. In open and semi-open systems the water comes into contact with the outside air as described above. In these systems contaminations of the cooling tower water by air pollution and by airborne micro-organisms play an important role. In addition to this, micro-organisms that have multiplied in the cooling tower water can disseminate via the air. In closed cooling tower systems this is not the case.

Cooling water issues

Fouling in cooling towers

The water is used in cooling towers often contains, even in the case of potable water, salts (such as chlorides, sulfates and carbonates), dissolved gases (such as oxygen and carbon dioxide) and metal ions (such as iron and manganese). The presence of these compounds can cause all sorts of problems. The main problems are scale formation, corrosion, biofouling and contamination. The problems that can possibly develop are likewise dependent on the construction material from which cooling towers are made. Concrete, wood, plastic and (galvanised) steel are often used to make cooling towers.



Micro-organisms

Bacteria and (pathogenic) germs are always present everywhere in the environment. So they can also be found in the cooling water in open recirculation systems. The micro-organisms find their way from the air into the water. If a number of conditions are fulfilled, such as the presence of nutrients and a pleasant climate (pH, temperature, quantity of oxygen) the micro-organisms present can multiply. The nutrient concentration can increase because water evaporates and the nutrients remain in the water. Moreover process leaks and the re-use of the water can encourage the nutrient content and the number of micro-organisms to increase. This can lead to all sorts of problems.

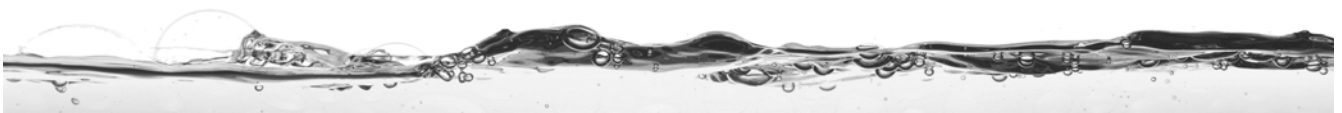
Biofilm

When there is a fast growth of micro-organisms a slimy layer develops consisting of organic and inorganic material. Some of the microorganisms excrete polymers, which after hydrolysis form a gel-like network around the cells. In the biofilm micro-organisms can attach themselves to available surfaces. The micro-organisms are able to stay on the surface and are not removed by the cooling water. The biofilm protects micro-organisms against other micro-organisms and poisonous substances. For this reason disinfection is often much more difficult when a biofilm has formed. For a part the biofilm consists of microbiological cells and their components. In the (very tenacious) biofilm organic and inorganic material is also present coming from the water, such as chemical precipitates, flakes of organic matter and dead cell mass and these are retained by the biofilm. Biofilm consists for 90% out of water. Biofilm is responsible for a number of problems in cooling towers.

Within the protective layer of biofilm, corrosion rates can increase by micro-biological activities, affecting the walls of cooling towers and heat exchange systems. The biofilm also inhibits corrosion protecting chemicals to be transported to the walls. In addition to this, microbiological reactions can accelerate existing corrosion reactions and microbiological by-products can affect the material. Biofilm also creates an insulating layer on heat-exchange systems due to which their efficiency is strongly decreased. Micro-organisms in the biofilm cause increased consumption of the oxygen present, which means that further up in the system a shortage of oxygen can develop. Some of the micro-organisms switch over to fermentative metabolic processes and produce large quantities of organic acid, causing a local decrease in pH. Anaerobic bacteria form on sulphide-based by-products, which are corrosive.

Legislation on Legionella in cooling towers

Various European Member States have taken measures to prevent or restrict exposure to *Legionella* bacteria in cooling towers (which can introduce water in aerosol form into the air). These measures are formulated in *Legionella* management plans and are focused on restricting



the spread of water vapour, avoiding stagnation of water, keeping the installations and installation water clean, preventing an increase in *Legionella* bacteria by the use of water treatment techniques and ensuring the correct and safe operation of the installation in accordance with the process specifications. These measures imply thus that water treatment techniques must be employed in cooling towers in order to combat *Legionella* bacteria and that checks must be performed in order to ascertain an acceptable level of *Legionella* bacteria.

Disinfection of cooling tower water

Disinfection of cooling tower water must comply with requirements other than those for disinfection of drinking water or swimming water. Disinfectants may not harm the cooling system and must primarily ensure that micro-organisms and biofilm – which can damage the system or reduce the cooling efficiency – are removed. The water in cooling towers is not used as drinking water and the quality does not have to comply with the same requirements as drinking water. It is, however, possible that personnel are exposed to splattering of water from cooling towers or come in contact with the water vapour, so it is necessary to inactivate the disease-causing micro-organisms such as *Legionella*.

ecodis® in cooling water treatment

There is a large demand for more sustainable and more environmental-friendly alternatives to the existing methods of treating cooling water with chemicals. The addition of chemicals is after all expensive, unsafe and unfriendly to the environment. Moreover the result of discharge is that part of the added chemicals is always lost. In addition waste water flows are also created that in general have to be treated or for which waste water discharge taxes must be paid.

In this regard, Ecodis offers a sustainable and ecological alternative to the use of biocides in cooling water systems. From investigation it appears that the *ecodis*® is capable of removing biofilm and preventing new growth. *Legionella* associated with biofilm can also be successfully combated. The *ecodis*® technology is thus a definite alternative to replace biocides in cooling water systems. In view of the relationship between different possible problems in a cooling tower the *ecodis*® technology moreover could also have a positive effect in combating corrosion and algae.

In order to come to an efficient application of the *ecodis*® technology in cooling water treatment a preparatory investigational project has been started.

In the business plan income is in this regard only provided from the second half of 2008.



3.7.3.4. Disinfection of waste water

The waste water market is a market characterised by a clear tendency to maximum re-use. What makes possible re-use problematic at the moment is the microbial quality of the effluent (after the water has been purified). The integration of anodic oxidation as a last step is a solution for this problem. A large quantity of water can as such be internally recycled, which has a recurrent positive effect on the balance of water being released and thus on the taxes to be paid by the companies. Disinfection of purified waste water can be a useful end step in the purification of waste water in the context of re-use of process water, which is encouraged by the European Union.

Possible applications here are:

- treatment programs for humidification installations;
- disinfection as the last step in OSSF installations (On-site sewage treatment);
- disinfection as the last step in the treatment and recovery of waste waters, such as cleaning water;
- disinfection of recovered water in for example car washes;
- disinfection of the permeate of membrane installations;
- keeping production water for water paints germfree;
- keeping cooling water germfree and recovery of a part of the flow in pasteurisation processes;
- the removal of odours (disinfection) from cutting oils in the metal processing industry;
- the elimination (oxidation) of cyanide in ground and/or waste waters;
- the elimination (oxidation) of iron in groundwater;
- the elimination (oxidation) of ammonia in the treatment of drinking water;
- the removal of (recalcitrant) pollutants, such as pseudo-oestrogens;
-

By using anodic oxidation with new types of electrode it is theoretically possible to rid waste water of COD (*chemical oxygen demand*) and BOD (*biochemical oxygen demand*). Ecodis is investigating innovative possibilities (nanotechnology) for waste water purification and recovery.

For this, no income has yet been provided in the business plan by way of precaution.



3.7.3.5. Other applications

- disinfection of food products: on the one hand there is the pressure from the coming European legislation (REACH) to forbid chlorination or treatment with e.g. peracetic acid of meat products (carcase cleaning in abattoirs), on the other hand scientific evidence exists for the extended shelf life of vegetables treated with *ecodis*[®] water;
- disinfection of rain water: after pre-filtration rain water can be converted to grey water to flush toilets among other uses, provided the microbial population present is killed and macroparameters are strengthened;
- ...

Here too the business plan does not assume any income.

3.8 References

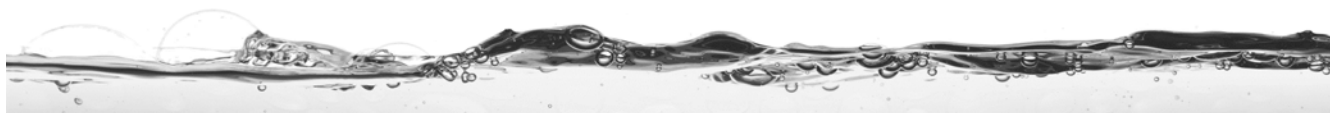
Although Ecodis, as an R&D-based enterprise, has only been active on the market for a few years (since 2002) and has just recently intensified its commercial activities, after completing its present product focus, it already has more than 50 client references primarily in the sphere of incoming water and *Legionella* prevention. These references are situated principally in the social service sector, governmental sector and food industry in Flanders and abroad.

Distribution of turnover according to application (in %):

	<u>2004</u>	<u>2005</u>	<u>2006</u>
Incoming water	10%	15%	21%
Legionella prevention	84%	81%	72%
Other (rent, services)	6%	4%	7%

Turnover by sector (in %):

	<u>2004</u>	<u>2005</u>	<u>2006</u>
Care industry	74%	69%	59%
Public sector	12%	11%	9%
Industry	14%	20%	32%



Some references in *Legionella* prevention

Hospitals

- ✓ St. Augustinusziekenhuis, Wilrijk
- ✓ St.-Norbertusziekenhuis, Duffel
- ✓ St.-Rafaël, Leuven
- ✓ St.-Jozefziekenhuis, Malle
- ✓ Psychiatrisch centrum, Kortenberg
- ✓ St.-Salvatorziekenhuis, Hasselt
- ✓ Heilig Hartziekenhuis, Eeklo
- ✓ St.-Fransiscusziekenhuis, Heusden-Zolder

Municipalities

- ✓ Municipal sports complex, '3 Fonteinen', Vilvoorde
- ✓ Municipal sports complex, St.-Maartens-Latem
- ✓ Municipal sports complex, Eeklo
- ✓ Municipal sports complex, Lommel
- ✓ Municipal sports complex, Lummen

Retirement & Care Institutions

- ✓ RVT Cocoon, Antwerp
- ✓ RVT De Verlosser, St.-Ulriks Kapelle
- ✓ RVT St.-Barbara, Herselt

Miscellaneous

- ✓ Heilig Hartinstituut, Heverlee
- ✓ Ministry of Defence, the Netherlands

3.8.1. Social Service Sector

Ecodis is the market leader in the Flemish social service sector regarding the disinfection of drinkingwater and sanitary installations (*Legionella* prevention) in a variety of hospitals and rest and nursing homes.

For example in the St. Augustinus hospital in Antwerp, Ecodis preventively treats the incoming cold drinking-water by means of two *ecodis*[®] cells with a capacity of 4 m³/hour. The *ecodis*[®] installation provides for protected germ-free water. Ecodis has also placed a temporary booster on the hot water in order to preventively disinfect pipes that were contaminated with biofilm in the past.

In the Saint Raphael hospital in Leuven, 50 dentists' chairs are disinfected with *ecodis*[®] water.

Despite the fact that, in the Netherlands, commercial activities were only launched in October 2006, a few Dutch contracts have already been signed.



3.8.2. Public sector

In the municipal sports complex of Lummen, an *ecodis*[®] installation disinfects the water of the 15 shower: one cell of 4 m³/hour operates on the mixed water system (hot and cold water is mixed to bring the temperature of the water up to 37°C). Water at this temperature is particularly sensitive to *Legionella* contamination.

In Merksplas, the reception centre for asylum seekers makes use of the *ecodis*[®] technology (*Legionella* prevention). In the Buildings Authority (Regie der Gebouwen), Ecodis has installed centrally one cell of 2 m³/hour per block as a preventive treatment of the cold water.

3.8.3. Industry

Meanwhile Ecodis also has numerous references in the private sector, particularly in the food industry.

At Inza there is a cell of 1 m³ /hour integrated in a system for rinsing bottles and at *Nutricia* (the Netherlands) they have an *ecodis*[®] cell of 4 m³ /hour to rinse the packing nozzle of the Tetra packing machine with sterile water in order to reduce the danger of bacteriological contamination of their dairy products to a minimum.

At Danone 3 cells of 4 m³/hour disinfect the water heated by the compressor groups. The sterile water is used for the preparation of the products and for cleaning the machines.

The cheese-maker Passendale makes use of a water tank connected to a hot water circuit to heat the cheese area by way of an air-conditioning system. Because *Legionella* contamination could develop in this hot water circuit and possibly bacteriological contamination could contaminate the cheese via the air, Passendale has decided to preventively install an *ecodis*[®] disinfection-unit.

At Vlevico in Halle (the meat-processing factory of the Colruyt group) five cells of 4 m³/hour have been set up to disinfect all the incoming cold drinking-water (60 m³/h) as a preventive measure.

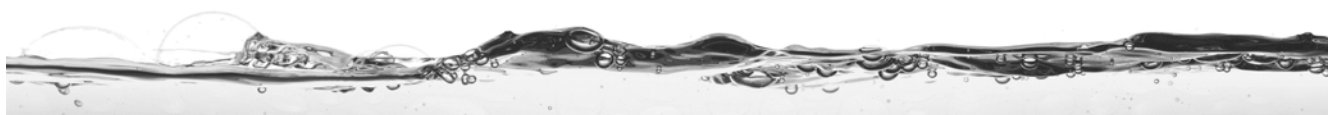
At Panasonic an *ecodis*[®] installation of 4 m³/hour disinfects all the showers as a preventive measure (*Legionella* prevention).

At Daf Trucks all the water (hot and cold) used in the kitchen is disinfected by an *ecodis*[®] 1.0.

Other references include: Campina and Centerparcs (the Netherlands), ... for *Legionella* prevention and Vegobel, Hidrodoe, PIPDA, ... for the disinfection of incoming water.

3.8.4. Private individuals

Ecodis has a few references in the area of the disinfection of private swimming pools.



3.9 Acknowledgements

3.9.1. Awards

Despite its youth, the *ecodis*[®] technology received as early as 2000 an honourable mention as the Innovation Award of the AQUATECH fair in Amsterdam, one of the largest and most important trade fairs for water in Europe. The verdict of the international jury in awarding this prize to the *ecodis*[®] system reads as follows:

*“The *ecodis*[®] is a new solution for water disinfection without addition of chemicals or use of radiation. The jury finds the new methodology to be sustainable because no chemicals are used and the energy costs are low. The jury finds it laudable, that an effort is being made to find a solution for Legionella prevention. It hopes that the manufacturer will continue to develop the product further, so that prevention is guaranteed under all circumstances.”*

3.9.2. Other

In other fields, Ecodis also receives expressions of appreciation for its scientific value and expertise. The Ecodis researchers are regularly invited as guest-speakers. In recent years, a number of presentations have been given at several symposia¹⁰⁰.

¹⁰⁰ Lectures for the general public, selection:

- 27 February 2003. HoReCa study day. Title of the presentation: The *e*-disinfector[®]: Efficient method for the prevention and combating of biological contaminations, including *Legionella*
- 30 August 2003. Belgapom (annual general meeting), Ypres. The *e*-disinfector[®]: Efficient method for the prevention and combating of biological contaminations, including *Ralstonia solanacearum* (by means of electrolysis)
- 22 January 2004. Workshop GOM – University of Ghent "New techniques for preservation of foodstuffs" Title of the presentation: Disinfection of water streams through electrolyse within the food industry
- 24 February 2004. Workshop GOM - University of Ghent "Trends in environmental technology for water, air and the soil." Title of the presentation: Possibilities of anodic oxidation in the treatment of industrial and domestic water streams
- 20 October 2004. IFEST 2004, Flanders Expo Gent. Title of the presentation: Water pipes without bacteria and biofilms ... utopia?
- 21 April 2005. TNAV Workshop, Congress Centrum Ter Elst, Edegem. Trends in drastic purification and re-use of water. Title of the presentation: Re-use of water by means of electrolysis
- 26 May 2005. Industrial forum The Water Cycle 2005 Annual Meeting. Sunparks De Haan. Title of the presentation: Possible methods of treatment for *Legionella*
- 22 November 2005. Study day 'Microbiologically safe water'. Vito, Mol. Title of the presentation: Electrolysis (anodic oxidation)
- 16 May 2006. TWA theme day: Innovative Technologies in the water sector, WTC Rotterdam. Title of the presentation: Prevention & removal of biological contaminations, including *Legionella*.
- 1 December 2006. Fermentation Study day XLIV. Title of the presentation: The *Ecodis*[®]: Safe water in the brewery.



Moreover, the Ecodis experts regularly reside as the only foreign representation on advisory committees in the Netherlands, pre-eminently the “waterland”¹⁰¹, and they hold mandates on a number of management boards of water-related lobbying groups (TNAV, B-IWA).

4. Research and development

4.1 General

As a technological and innovative enterprise, research and development hold a central place in Ecodis. A team of qualified engineers and scientists under the leadership of Elmar Peters is charged with the development of new technologies and new applications. In addition to fundamental, internal research and development Ecodis welcomes the advice of various experts. This has already resulted in many collaborations.

4.2 Internal research and development

By bringing together a multidisciplinary research team and after the many research collaborations with partners, Ecodis has for a good seven years built up a large scientific and technological lead in all aspects of water and water treatment:

- microbiology: the Legionella issue, biofilm removal;
- chemistry: formation of by-products, oxidation processes and oxidation of pseudo-oestrogens;
- water analysis: impact of water parameters on oxidation strength;
- materials science: determination of corrosivity and efficiency in certain electrode configurations;
- electronics: developed hardware, communication and measuring and regulatory technique;
- IT: software (applications and operating system).

Ecodis employs five people in R&D, two of which have a PhD. in the domains of chemistry and bioscience engineering.

Regarding the development aspect, a highly qualified and complementary team has been put together that unravels and further improves every aspect of the *ecodis*[®] technology and the practical implementation. Already a few noteworthy technological improvements have been

¹⁰¹ For example: Disinfection techniques for swimming water.



achieved, such as the on-line monitoring, remote control and emergency centre. New designs are always explored with the purpose of increasing the yields, standardisation and improvement of hardware and software. For testing Ecodis has its own electronics lab.

Ecodis also has its own water research lab that has been notably extended in a short time. In this laboratory, lab scale tests can be performed on water samples from potential clients. The infrastructure offers maximum flexibility for testing different set-ups and configurations in which all important parameters are monitored continuously during the tests. Chemical analyses can also be performed for all relevant water parameters.

Tests can not only be performed in the lab, but also *on-site*. For this purpose Ecodis has constructed a series of mobile test units. These units have already been used for decontamination and for prospection. On the basis of the obtained data, installations can be optimally dimensioned and installed.

4.3 Collaborations and research projects

For already a long time now, Ecodis has had the results of its research double-checked by different research institutions, including universities, colleges and public and private institutions (e.g. water companies). A number of projects have already been supported by the IWT (Institute for the promotion of innovation by science and technology in Flanders).

4.3.1 Research on the configuration of the electrolysis cell

Professors J. Fransaer and M. De Bonte of the research group MTM (*Metals Science and Applied Materials Science*) of the KULeuven carried out tests on the *ecodis*[®] cell to improve the efficiency of the electrolysis cell. A long-term collaboration activity has recently been started. Part of the research work is performed by the Ecodis scientists in the laboratory infrastructure of MTM. A number of analysis techniques are available there that allow electrode processes to be followed and new electrode materials to be evaluated. MTM also actively collaborates with the monitoring and adjustment of the experiments in practice and the interpretation of the results.

4.3.2 Research on the disinfection efficiency of the *ecodis*[®] cell

In the context of an SVW project (Collaboration Flemish Water) Prof. Dr. C. Van Keer of the Catholic College of Saint Lieven (Ghent) studied the disinfecting capacity of the *ecodis*[®] technique on living bacteria in water. This research has already been highlighted in section 3.2.1. They have also investigated, on behalf of the SVW, the effect of *ecodis*[®] on killing and removal of biofilm (as described in section 3.2.2.6.).



Prof. E. Moyson of the Faculty of Bioscience engineering of the KULeuven verified the impact of *ecodis*[®] on biofilms and biofilm associated bacteria.

In the field of dentistry, professor D. Declerck of the Department of Dental Surgery at the KULeuven analysed the effect of the *ecodis*[®] solution in a dentist's chair¹⁰². This is traditionally an ideal habitat for the formation of biofilm because the heated-up water runs through tiny pipes. His verifications demonstrate that the *ecodis*[®] solution deals preventively and successfully with this problem on the condition that a minimum water consumption is guaranteed.

Furthermore Professor F. Ollevier, head of the Aquatic Ecology Lab of KULeuven, has demonstrated that the *ecodis*[®] system is capable of killing *L. pneumophila* efficiently without exceeding the drinking water standard of 0.25 mg/l free oxidising agents¹⁰³. To prevent Legionnaires' disease it is however not only sufficient to only kill *L. pneumophila*; also the amoebae – the host of *L. pneumophila* – and biofilm must be destroyed. This investigation has led to the first scientific publication concerning the matter. Further research has yet to be published.

This research has later been continued in collaboration with Prof. J. Etienne (Inserm, Lyon, France) and Lab Derva (Heusden-Zolder). The impact of *ecodis*[®] on 10 wild-type isolates of *L. pneumophila*¹⁰⁴ has been verified. The results of this study confirmed the earlier observations under laboratory conditions. At a concentration of approximately 0.3 mg/l of free oxidising agents a Log 7 reduction has also been realized for 'wild-type' isolates of *L. pneumophila* within an exposure time of only 15 minutes.

In the Netherlands KIWA Water Research has conducted a scientific investigation on the effect of *ecodis*[®] on *L. pneumophila*. In this project Ecodis was invited to evaluate whether its newly-built pilot installation was reliably suited to evaluate and validate alternative disinfection methods.

¹⁰² Ryckeboer, J. 2005. Bestrijden van microbiële contaminaties in leidingen met electrolysis. Milieutechnologie 5:4-7.

¹⁰³ Delaedt, Y., A. Daneels, P. Declerck, J. Behets, J. Ryckeboer, E. Peters and F. Ollevier. 2006 The influence of electrochemical disinfection on *Escherichia coli* and *Legionella pneumophila* in tap water. Microbiological Research (in press).

¹⁰⁴ These isolates were derived from patients infected with *Legionella*.

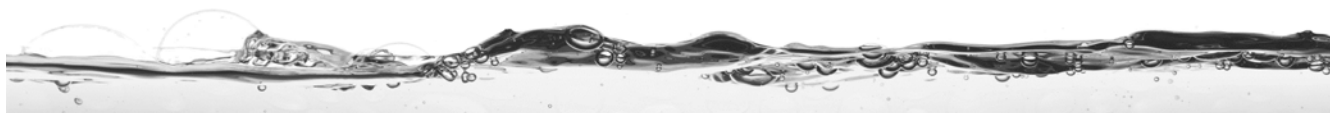




View of the KIWA pilot installation

4.3.3 Research on the environmental-technical aspects of the *ecodis*[®] technology

A quantitative investigation of the *ecodis*[®] system has also been performed by PIDPA (Provincial and Intercommunal Drinking water company of the Province of Antwerp). They investigated the possible release of metals by the electrodes of disinfection equipment. On the basis of the quantitative (analysis reports) and semi-quantitative measurements performed, it could be concluded that by using the *ecodis*[®] no metals were recovered ($> 5 \mu\text{g/l}$) except for a few common elements such as nickel (Ni), copper (Cu), zinc (Zn) and lead (Pb) the levels of which were much lower than the drinking water standard. Most of the metals investigated (as was apparent from the screening) were not found at the ppb level. Further PIDPA investigated the possible production of halogenated organic compounds by the *ecodis*[®]. On the basis of the measurements performed it could be concluded that when using the *ecodis*[®] system lower concentrations of halogenated components were formed in comparison with treatment with NaOCl (bleach) for the water type under study. The resulting concentrations were approximately 40% lower than those found in comparison with NaOCl for the same concentration of free chlorine. Despite the fact that the chosen water type had a high organic carbon content and that a high concentration of free oxidising agents was set at approximately 0.8 mg/litre (norm = 0.25 mg/litre) the concentrations of haloforms (carcinogenic substances) were more than a factor 5 lower than the drinking water norm. On basis of these results it can be stated that the *ecodis*[®] can be regarded as a satisfactory disinfection technique for drinking water.



At the Faculty of Bioscience engineering at the KULeuven, Prof. C. Peeters is coordinating research on the formation of disinfection by-products as a function of the water quality. The investigation clearly indicates that these by-products are far beneath the allowed concentrations in drinking water.

Finally, Professor W. Verstraete of the Laboratory for Microbial Ecology and Technology (LabMET) of the University of Ghent demonstrated that the *ecodis*[®] cell can remove pollutants from water, such as residues of certain pseudo-oestrogens.

4.3.4 Research on specific application fields

The *ecodis*[®] solution can also play a key role in the food industry. A first application is the decontamination of washing water or other dirty water by guiding it through the electrolysis cell. Next to the direct oxidizing effect of the radicals themselves, a residual effect will last for a while in the treated water because of the presence of free oxidising agents. Of this use is made in a second application of the *ecodis*[®] system, namely the decontamination of vegetables and fruit.

It appears from research by Prof. F. Devlieghere of the University of Ghent (Laboratory of Food Microbiology and Food Preservation) together with Prof. J. Coosemans of the Laboratory of Phytopathology and Plant Protection of the KULeuven and Ecodis, that the population of spoilage micro-organisms in process water is spectacularly reduced (with 5 - 8 log kve / ml, measured after 45 min with a content of free oxidising agents of maximum 5.1 mg/l). In literature little is known on the effect of electrolysis on the flora responsible for spoilage, in contrast to pathogens of which only a few publications have already appeared (Okull & Laborde, 2004; Park et al., 2004). In additional research by Prof. F. Devlieghere at the University of Ghent the decontamination of vegetables and fruit with the *ecodis*[®] were investigated. The results indicated that after the washing of fresh cut mixed lettuce with water treated with *ecodis*[®] a spectacular reduction in the spoilage organisms present was observed (after 5 minutes washing with a free oxidising agents content of 3.6 mg free chlorine/l a reduction of approximately 2 – 3 log kve / g lettuce). The use of the *ecodis*[®] further led to a reduction in the concentration of spoilage organisms in minimally processed carrots, iceberg lettuce and white cabbage and this was without affecting the sensorial qualities (taste) (more then 1 log reduction).

Research indicated that *ecodis*[®] can extend the shelf-life of minimally processed cabbage considerably, after all it had previously been demonstrated that the *ecodis*[®] cell could decontaminate processed cabbage without affecting the sensorial qualities. From the performed research it can be deduced that the shelf- life of minimally processed cabbage could be extended by at least five days at 4°C or by three days at 7°C after washing with *ecodis*[®] water.

In contrast to the use of chlorinated water (50 – 200 ppm) when the concentration of free oxidising agents necessary to obtain a decontaminating effect is much lower *ecodis*[®] is used. An important

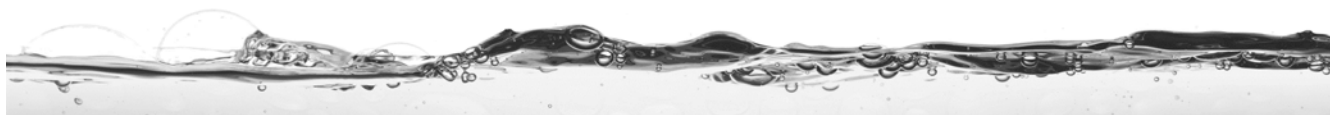


consequence is that fewer chlorinated organic components such as trihalomethanes (THM) will be formed in comparison with the use of chlorinated water. These compounds are thought to be carcinogenic and cause a reduced fertility (Nieuwenhuijsen et al., 2000). Further investigation of this topic is ongoing.

More details regarding research into the decontamination of washing water or other dirty water and the decontamination of vegetables and fruit can be found in following publications:

- Gómez-López, V.M., Ragaert P., **Ryckeboer J.**, Jeyachandran V., Debevere J. and Devlieghere F., 2007. Shelf-life of minimally processed white cabbage treated with neutral electrolysed water and stored under equilibrium modified atmosphere. Int J Food Microbiol (Submitted for publication);
- Gómez-López, V.M., Devlieghere F., Ragaert P., Chen L., **Ryckeboer J.**, Debevere J., 2007. Decontamination of minimally processed vegetables by gaseous and liquid chlorine dioxide and neutral electrolysed oxidising water. Int J Food Sci Tech (Submitted for publication);
- Gómez-López, V.M., Ragaert P., Jeyachandran V., **Ryckeboer J.**, Debevere J. and Devlieghere F. 2006. Electrolysed oxidising water to prolong the shelf-life of minimally processed white cabbage. FoodMicro 2006, August 29-September 2 2006. Bologna, Italy;
- Ongeng, D., Devlieghere F., Debevere J., Coosemans J. and **Ryckeboer J.**. The efficacy of Electrolysed Oxidising Water for inactivating spoilage microorganisms in process water and on minimally processed vegetables. Int J Food Microbiol 2005;109: 187-197;
- Ragaert, P., Devlieghere F., **Ryckeboer J.**, Coosemans J. and Debevere J. Nieuwe decontaminatietechnieken voor groenten en fruit. Voedingsmiddelentechnologie 2004;9:18-20;
- Nieuwenhuijsen, MJ., Toledano, M.B. & Elliott, P. Uptake of chlorination disinfections by-products; a review and a discussion of its implications for exposure assessment in epidemiological studies. J Exposure Analysis and Environmental Epidemiology, 2000;10. 586-599;
- Okull, D.O. & Laborde, L.F., Activity of electrolysed oxidizing water against *Penicillium expansum* in suspension and on wounded apples. Food Microbiol Safety, 2004;69(1), 23-27;
- Park, H., Hung, Y. & Chung, D., Effects of chlorine and pH on efficacy of electrolysed water for inactivating *Escherichia coli* O157:H7 and *Listeria monocytogenes*. Int J Food Microbiol, 2004; 91, 13-18.

Finally, research has been started recently by Prof. F Devlieghere together with Dr L Herman of the ILVO (Institute for Agricultural and Fisheries Research, Melle) on the effect of the *ecodis*[®] system on the shelf-life of meat. The first results are indicating a fast decontamination of process



water, while the results concerning the decontamination of the meat products themselves will be available in the near future.

The *ecodis*[®] system also offers possibilities of disinfecting horticultural irrigation water or recovered water. Regarding this topic research at the Laboratory for Phytopathology and Plant Protection of the KU Leuven showed that fungi such as *Rhizoctonia solani*, *Trichoderma hamatum*, *Pythium ultimum* and *Fusarium oxysporum* f. sp. *radicis-lycopersici* are quickly killed in water flowing through the *ecodis*[®] system. There was also a pronounced residual effect. Factors like the level of free oxidising agents, possible survivors of the fungi (spores) and the organic load of the water obviously played a part in this. In this investigation efficient killing of the test bacteria *Ralstonia solanacearum* and *Bacillus subtilis* was observed at the same time and with very low values of free oxidising agents. These results are very positive, certainly in the case of *R. solanacearum* in view of the international quarantine status of this organism.

4.3.5 Other research activities

At the moment research is also being undertaken on the disinfection of drinks dispenser systems with the *ecodis*[®] in collaboration with a large international player in the beverage industry. Here the focus lies on miniaturisation for the treatment of small flows.

In addition to universities and colleges, Ecodis also works closely with different institutions which are active in the water industry including specialist water analysis labs and industrial partners.

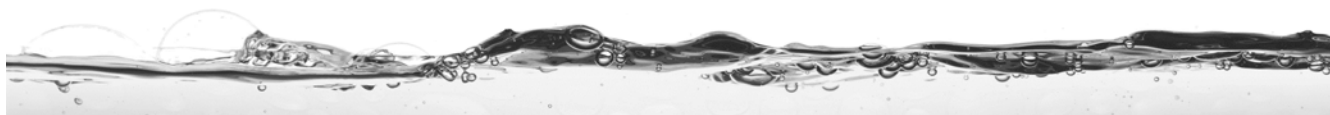
Ecodis plans more research projects in the future. Both long-term investigations, oriented towards fundamental research (e.g. doctoral studies) and short, more applications-oriented projects will be initiated. At the moment a research project is studying the application of the *ecodis*[®] technology in cooling water.

4.4 **Intellectual property**

Trade and commercial secrets

A substantial part of the Ecodis technology falls under trade and commercial secrets. The company is of the opinion that it possesses an important competitive advantage considering the confidentiality of its know-how. Although the company tries to protect as well as possible these secrets via, among other things, non-disclosure agreements and protected computer networks the risk is not excluded that certain secrets may be disclosed to third parties and that because of this the company may lose certain competitive advantages. However, the company estimates this risk as being low.

Patents





In March 2006 Ecodis submitted a European patent application (number 06447032.1) with recovery of priority to March 2005. The application concerns a method for removing pollutants from water-based fluids. It is not certain whether a patent will be granted in the end, at least in the requested form.

Ecodis is considering submitting additional patent applications in the future with respect to other specific applications of the *ecodis*[®] technology.

Brands

The company is the holder of two Benelux brands: the Benelux logo and slogan "ECODIS, innovation in water" registered under the number 679298 since 26 January 2001 and the Benelux name "ECODIS" registered under the number 821433 since 3 April 2007 in all relevant classes. Although registered, brands remain susceptible to contention by third parties.

Copyright

The company enjoys copyright protection of the computer programs that have been developed by its employees and are used for operating its products. The Company is on the verge of acquiring the rights to the accompanying manuals. However, this has not been completed yet so there is no certainty about this.

4.5 Certification

In Flanders the application procedure for certification of the *ecodis*[®] system for the treatment of drinking water in the context of *Legionella* prevention started on 27 March 2005. This application is based on the *Legionella* decree revised on 11 June 2004. On the basis of this decree the competent minister can decide that the recommended "thermal disinfection" may be replaced by an alternative system. On the basis of this order the minister can approve pilot projects that comply with the following requirements: (1) no elements are added to the water that are not allowed for the treatment of drinking water and no methods are used that result in exceeding the allowed concentrations of material in drinking water; (2) the efficacy and the safety for people and the environment of the method must be demonstrated by means of lab tests; and (3) the test project is monitored by a steering group in which at least three independent university departments and a person from the administration are represented. The *ecodis*[®] system has been assessed as complying with all requirements and Ecodis has therefore successfully completed this part of the process, in which the application procedure now finds itself in the final phase. In this final procedure an *ecodis*[®] pilot installation is at the moment being closely monitored for a duration of at least three months.

In the Netherlands at the request of the Ministry of VROM, the KIWA has conducted an investigation into alternative *Legionella* prevention techniques. After intensive monitoring of an

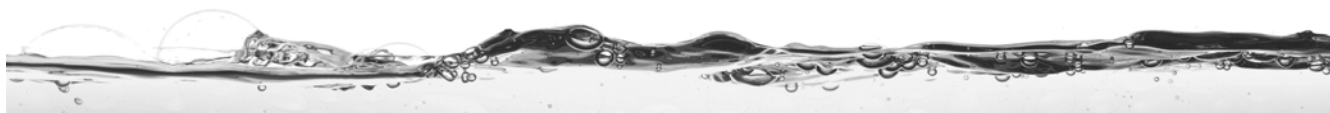




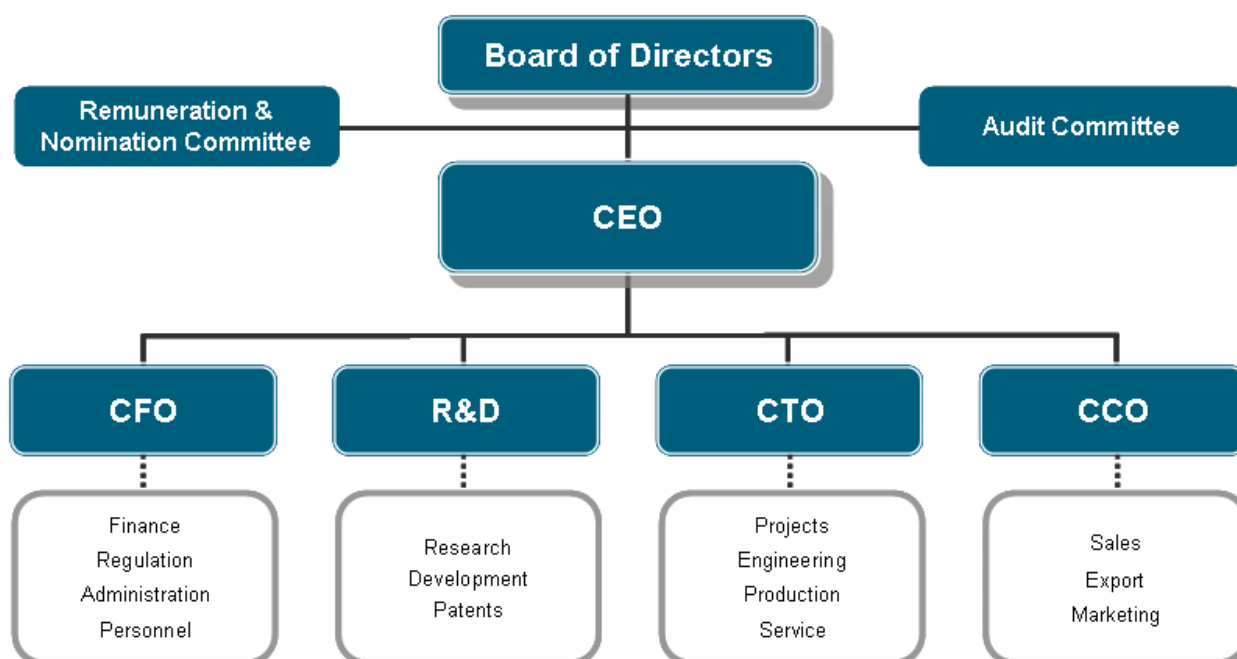
ecodis[®] pilot installation Ecodis was the first company in the Netherlands to receive in March 2007 a “Declaration of No Objection” in which Ecodis (under the supervision of the VROM) was given permission to place *ecodis*[®] installations in the Netherlands on an unrestricted basis¹⁰⁵. On the basis of positive measurements on at least 5 to maximum 10 locations this provisional approval will later be automatically converted into a final certification.

In France and the United Kingdom certification procedures have also been initiated. Ecodis expects to obtain the certification here as well.

¹⁰⁵ See for conclusion of international expert committee § 3.7.2.2.



5. Organisational structure



5.1 Board of Directors and committees

For the constitution of the board of directors and its committees and a description of its responsibilities the reader is referred to chapter IV.

5.2 Management

Ecodis is managed day-to-day by the CEO, Elmar Peters (the permanent representative of ANEL BVBA). A brief CV of Elmar Peters is included in chapter IV above.

Elmar Peters is supported by the Administration and Finance department, consisting of a CFO and (partially) the Office Manager (Carine Cels). This department is responsible for the accounting, the financial management, legal matters, administration and personnel. The position of CFO is pending the appointment of a full-time CFO later this year; *ad interim* it is held on a part-time basis by Cynthia Verswijvel-Cornelissen who has assisted Ecodis in all finance matters since its start-up. A limited extension of this department for the support of the new management in the years to come is foreseen.



Ecodis has the intention to extend its management team in the following months by a CCO and CTO, who will be responsible for the management and development of, respectively, the Marketing & Sales department and the Projects & Production department.

5.3 Operational departments

At the moment, Ecodis is structured around three operational departments, next to the Administration and Finance department. At present the responsibilities are still interrelated, but in the future a very strict division will be established. This will put Ecodis in a position to maintain the pace of its R&D effort and not to compromise the “time to market” and thus realize the growth ambitions.

5.2.1 Research, Development and Patents

The R&D department is supervised directly by Elmar Peters and consists of the following cells:

- Microbiology Research Cell;
- Automation and Electronics Development Cell;
- Chemical Research Cell;
- Software Development Cell.

At the moment this department consists of 6 qualified engineers, 4 of whom -for the time being- also work part-time for the department of Projects, Engineering, Production and Services. As an R&D-driven enterprise, Ecodis will continue to enlarge the R&D department in phases. By 2009, Ecodis expects that this department will employ around 10 people.

5.2.2 Projects, Engineering, Production and Services

The department of Projects and Production is managed by Peter Van Gils and is responsible for:

- all project engineering and development;
- production;
- services.

At present, this department consists of 8 people, a few of whom work part time. Next to software, electronics and project engineers, Ecodis employs a few specialist technicians and installers. Ecodis expects that, by 2009, the number of employees in this department will gradually double as the result of the anticipated growth. Ecodis will -to a significant extent- outsource the actual production and installation to specialised companies. In appropriate cases, vertical integration through acquisitions and partnerships may be considered.



5.2.3 Sales, Exports and Marketing

The department of Sales & Marketing consists of:

- the Sales Team, which at the moment comprises two Sales Managers (Benelux and Export); in line with the anticipated geographical expansion, one or more additional Sales Managers will be recruited per country;
- a Marketing & Communications manager;
- Business Development:
 - Currently, Ecodis has a team of four Business Development Managers (including one for the Netherlands), which will be extended to 8 in the course of 2007; and
 - at present, an internal Sales Assistant is employed and an additional Assistant is planned by 2008.

6. *Ambition and strategy*

In the medium-term, Ecodis has the ambition to become the European market leader in the development, production, sale and management of environmental-friendly water technology (such as anodic oxidation without addition of salts or chemicals). In this regard, Ecodis intends to conduct an ethically well-founded policy by (directly or indirectly) financing projects in Third World Countries in which it will place its technology and knowledge at the service of the local population.

Ecodis wishes to fully benefit from the excellent market opportunities and growth perspectives for companies with innovative water treatment technologies based on the following strategic guidelines.

6.1 Profile, positioning and structure

In the future, Ecodis wishes to continue to profile itself as a research-driven R&D company, active in research and development, production, marketing, sales and provision of services and will for this, if necessary, establish appropriate (more) efficient (group) structure(s) or enter into partnerships.

Except for specific fields of application, Ecodis also wishes to continue to position itself in the future as a “*total solutions provider*” for its clients. Such a service model -that can provide a complete package of services- is directed at procuring optimum long-term client relations and generating of annual recurrent income. For certain specific applications (such as for the treatment of (swimming) pool water), Ecodis considers setting up separate structures and/or entering into partnerships.

Depending on the situation in each specific country and in particular the collaboration possibilities with local partners, Ecodis will set up an appropriate structure and organisation in each foreign country.



6.2 **Research and development**

In the first place, Ecodis as a R&D driven enterprise, wishes to continue to maintain and extend its technological knowledge and expertise, by continuing to invest in research and development.

The R&D investments and activities of Ecodis will always be focused on the timely identification, development and marketability of new possible applications.

Next to finalising the fundamental research into the disinfecting strength of the *ecodis*[®] technology and the correlation with *Legionella*, amoebae and biofilm, Ecodis will timely start up research projects with regard to newly identified application-opportunities (e.g. cooling water treatment) and technological improvements of the *ecodis*[®] technology requiring additional research and development.

Future (product) development projects will be focused on the standardisation, modulation, “upscaling” (for macro flows), “economisation” (for standard flows), miniaturisation (for micro flows) and/or integration (with before-and-after treatment steps) of the *ecodis*[®] installations, together with the upgrading and further development of the present software and the establishment of an internet platform.

The cautiously including of *time-to-market* planning of some of these possible applications and product development projects in the business plan, is elaborately in chapter VI under 6.2 Outlook 2007-2012.

In addition to the further expansion and strengthening of its internal R&D department, Ecodis wishes to continue to extend the collaboration with national and international knowledge centres and (industrial) partners in a phased and focused manner.

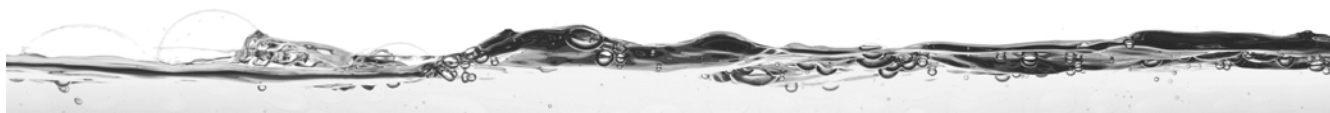
In order to protect its R&D efforts, Ecodis will initiate the appropriate legal proceedings proactive and in good time. The strategy of Ecodis is focused on submitting patent applications with respect to specific fields of application.

6.3 **Sales and marketing**

The sales and marketing strategy of Ecodis is based on a thorough analysis of the market perspectives of different possible applications identified by Ecodis, in which in particular the present and future product development possibilities are also taken into account.

The basis guidelines of Ecodis sales strategy are as follows:

in the first place the sales focus of Ecodis will be directed more intensively on the present fields of application being (i) the disinfection of incoming tap and groundwater in the care sector, public sector and (production) companies and (ii) *Legionella* decontamination and prevention;



at the same time the sales focus will be directed towards a number of identified and specific industrial applications, (swimming) pool water disinfection of small to medium-sized (swimming) pools/baths (up to 200 m³) and, to a lesser extent, towards the possibilities for mobile disinfection units;

in the medium-term the sales focus of Ecodis will be directed towards a number of identified B2B and B2C applications, for which in many cases further additional R&D effort is required.

The geographical sales focus of Ecodis is in the short-term principally focused on Benelux as the home market, and France and the United Kingdom as first export markets. In the medium-term Ecodis foresees a phased and systematic European expansion. At this Ecodis will continue to bestow the necessary attention on thorough preliminary market prospecting and on possibilities of concluding partnerships with local companies.

In order to fully support its sales efforts, Ecodis will give priority to obtaining the official certification in Belgium and abroad.

Ecodis will support its commercial efforts with appropriate general and/or specifically directed communications and marketing activities (e.g. for *Legionella* treatment or (swimming) pool water disinfection) and by setting up joint pilot projects with industrial clients (for industrial applications).

Furthermore, Ecodis will pay attention to a variety of market-supporting or sensitizing initiatives aimed at increasing its external visibility as a stock exchange quoted enterprise, such as maintaining an informative website, organising symposia, scientific publications, participation in trade fairs, membership of representative (lobbying) organisations and institutions, etc.

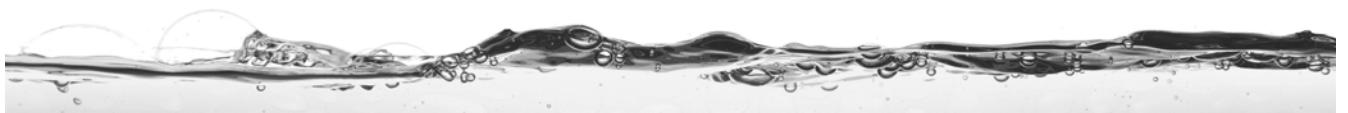
6.4 External growth

In addition to strong internal growth, Ecodis also foresees selective external growth if this is complementary to its activities, strategy and mission.

Acquisitions will be focused on a horizontal integration (broadening of the selection of products and services), vertical integration or geographical expansion.

6.5 Human capital

In order to realise its growth ambitions Ecodis will further extend its multidisciplinary team with motivated, involved and qualified managers and employees.





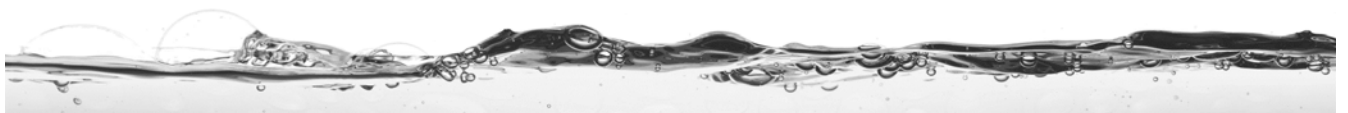
Ecodis considers “human capital” to be one of its most essential assets. The human resource policy of Ecodis is in the first place directed towards creating a challenging and pleasant working environment with opportunities for personal development of each employee and manager.

7. *Important agreements*

In the past 2 years, Ecodis concluded no important agreements outside its ordinary scope of business activities.

8. *Government interventions, lawsuits or arbitrations*

During the 12 months preceding the date of this prospectus, no government interventions have occurred and no lawsuits or arbitration cases were pending that could have an impact or had such an impact on the financial position or profitability of Ecodis.



Chapter VI: Management discussion and analysis on the financial position and operating results

All financial information given in this chapter is based on the audited consolidated financial statements of Ecodis NV for the financial year ending 31 December 2006 and the unaudited, unconsolidated financial statements for the financial years ending on 31 December 2005 and 2004. The financial information is expressed in thousands of euros unless otherwise mentioned.

The financial information is presented in accordance with Belgian generally accepted accounting principles (BGAAP).

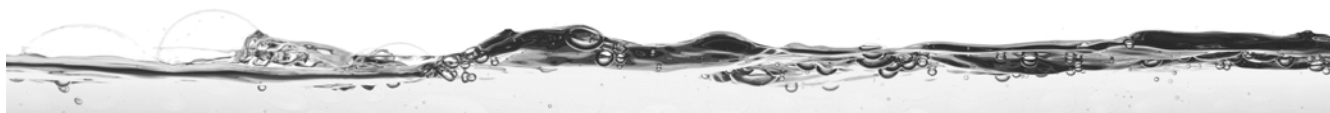
The following explanations and analyses should be read in conjunction with the audited consolidated annual accounts of the Company, including the notes to the financial statements that are incorporated in this prospectus. Certain statements in this part of the Prospectus are “statements about future facts and events” and should be read in conjunction with the disclaimer described in the introduction to this Prospectus.

1. Overview

Ecodis NV was founded in July 2002 and ended its first financial year on 31 December 2003. The company completed its fourth financial year at the end of 2006. Ever since it was founded, the company has concentrated primarily on the further development of the *ecodis*[®] technology.

Thanks to the research and development efforts, the quality of *ecodis*[®] has become much more reliable, efficient and targeted and the product is now ready to be marketed as a fully-fledged water disinfection system.

Given that, until now, research and development were more important than building up sales channels, Ecodis NV's historical sales cannot be viewed as a relevant parameter for measuring the success of the *ecodis*[®] technology.



2. *Factors influencing the operating results*

2.1 Internal factors

The enterprise's decision to invest heavily in research and development has significantly influenced the operating results. Furthermore, it was decided in 2006 to discontinue capitalizing research and development costs. In 2006 around EUR 0.720 million was spent on research and development.

2.2 External factors

- Macro-economic and socio-economic factors

Ecodis NV's ability to implement its business plan can be influenced by the global importance attached to water disinfection in both the private and the public sectors. The forecasts given in the financial plan are based on the Benelux, France and the United Kingdom. Relatively more importance is attached in the business plan to the domestic market than to the French and British markets. Any change in environmental legislation in these countries can cause the actual outcome to deviate from the forecasts given here.

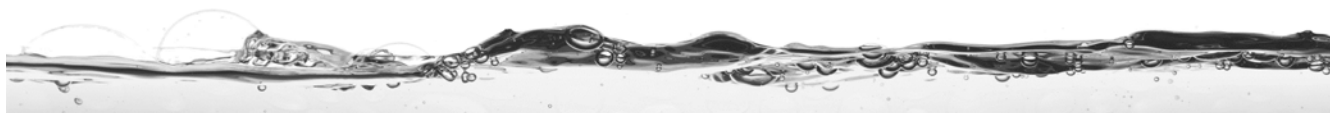
- Government recognition of *ecodis*[®]:

ecodis[®] has been accepted by the Dutch government as a generally accepted and reliable disinfection system. If *ecodis*[®] gains similar recognition in the other countries included in the business plan, this can positively impact the achievement of the forecasted sales.

- Attracting qualified employees

Installing *ecodis*[®] is a complex operation requiring the involvement of qualified employees. For marketing the products, the company needs equally to be able to put together a competent sales team.

The availability of such people on the labour market and the company's success in attracting employees will also influence the realization of the business plan.



3. *Operating results*

3.1 Overview

The table below shows the consolidated income statement for 2006 and the unconsolidated income statements for 2004 and 2005.

amounts in € '000	31 December 2004	31 December 2005	31 December 2006
Operating income	232	580	401
Turnover	189	562	373
Fixed assets – own production	32	0	0
Other operating income	11	18	28
Operating charges (-)	(790)	(1,060)	(1,493)
Raw materials , consumables and goods for resale	(168)	(268)	(214)
Goods and services	(309)	(377)	(498)
Payroll , social security charges and pensions	(233)	(327)	(662)
Depreciation and amounts written off tangible fixed assets	(78)	(84)	(112)
Other operating charges	(2)	(4)	(7)
Operating loss	(558)	(480)	(1,092)

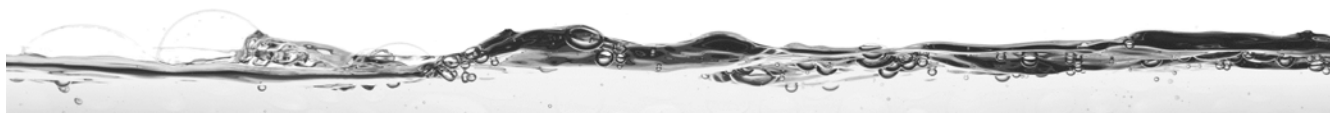
3.2 Turnover

Breakdown of turnover by type

	2006	2005	2004
Installations	293	527	187
Maintenance	43	13	2
Rental	12	22	
Audit	25		
Total	373	562	189

The above analysis of turnover shows that Ecodis has succeeded in extending its service offering and that the relative importance of maintenance contracts has grown with the sales of installations in the past.

Sales of installations fell in 2006 compared with 2005. This is due solely to the strategic decision taken by the board of directors to direct efforts within Ecodis, from the second half of 2006



onwards, expressly towards the further development of the product with a view to producing standard solutions, which will significantly increase future sales.

3.3 Gross margin

Production of the gross margin (in '000)

	2006	2005	2004
Turnover	373	562	189
Cost price of materials used	214	267	168
Gross margin (in EUR 000)	159	295	21
(in %)	42.6%	52.5%	11.1%

The fall in gross margin in 2006 is primarily the result of the decision not to capitalize research and development costs any more in 2006. As a result the materials used for research and development have been included in the cost price of the materials used.

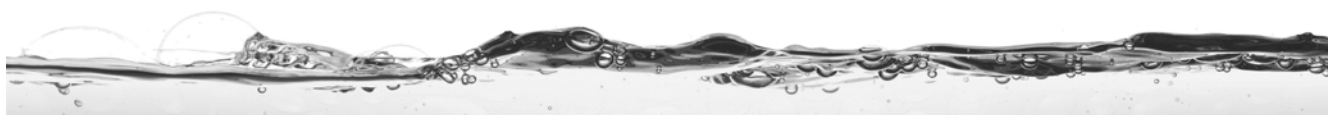
In 2004 Ecodis did not yet have a clear pricing strategy. The margin achieved in that year is therefore not representative.

3.4 Other operating charges

3.4.1. Services and other goods

The cost of services and other goods consists in 2006 primarily of directors' remuneration (120), company vehicles (84), rent and rental costs of the building (70) and various fees and advisory costs (72).

The cost of services and other goods rose during the past three years from EUR 0.309 million in 2004 to EUR 0.497 million in 2006. This increase is due mainly to the use of a larger operating building (increase of EUR 0.056 million vs. 2005) and the increase in company vehicles (increase of EUR 0.060 million vs. 2005).



3.4.2. Payroll, social security charges and pensions

Personnel costs rose from EUR 0.327 million in 2005 to EUR 0.661 million in 2006 (+ 102%). The average number of employees (in FTE) rose by 64% from 6.4 in 2005 to 10.5 in 2006.

Mainly higher profile employees were hired in 2006. This had the effect of increasing personnel costs more than the number of employees.

3.4.3. Depreciation, amortization and amounts written off

Depreciation and amortization amounted to EUR 0.078 million in 2004, EUR 0.083 million in 2005 and EUR 0.112 million in 2006. This increase is explained by the pace of investments in recent years. The decision to cease capitalizing research and investment costs had the effect of keeping down amortization costs in 2006.

3.5 Operating result (EBIT)

As a result of the company continuing to invest in the future by hiring high qualified employees and the greater emphasis on product development, the operating result fell to a loss of EUR 1.091 million.

3.6 Financial result

€'000	2006	2005	2004
Financial income			
Interest received	2	2	1
	2	2	1
Financial charges			
Borrowings	17	8	8
Finance leases	4	3	2
Other financial charges	9	3	1
	30	14	11
	(28)	(12)	(10)

The increase in financial charges is due to the additional subordinated bond loan. The other financial charges in 2006 consist mainly of bank charges in relation to additional credit facilities.

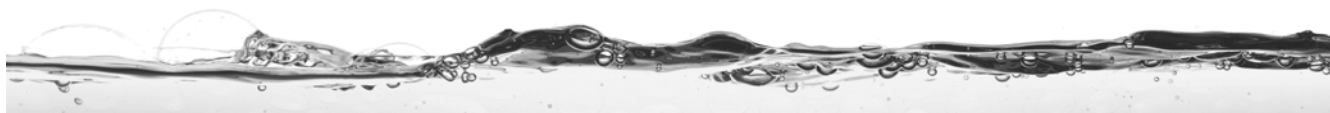


3.7 Taxes

Management points out that the group does not recognize its active deferred tax assets.

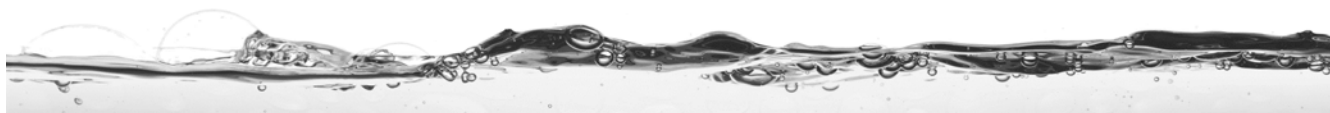
3.8 Net result

The consolidated net loss for the year ending on 31 December 2006 amounted to EUR 1.119 million compared with EUR 0.491 million in 2005 and EUR 0.570 million in 2004. The main losses in 2006 are due primarily to substantial investments, the setting up of the sales structure and research and development in an amount of around EUR 0.720 million.



4. Balance sheet

in € '000	2006	2005	2004
ASSETS			
Fixed assets			
Intangible fixed assets	54	45	46
Tangible fixed assets	167	97	145
Financial fixed assets	2	3	1
Total fixed assets	223	145	192
CURRENT ASSETS			
Inventories	186	128	93
Trade debtors and other current assets	108	143	78
Cash and cash equivalents	233	134	181
Total current assets	527	405	352
Total assets	750	550	544
LIABILITIES			
Equity			
Issued capital	1,460	734	334
Issue premiums	566	566	566
(Consolidated) Reserves	(2,555)	(1,436)	(944)
Total equity	(529)	(136)	(44)
Long -term liabilities			
Subordinated loans	750	250	125
Credit institutions	134	9	22
Total long -term debt	884	259	147
Current liabilities			
Financial debts	4	21	16
Trade payables	152	278	327
Other amounts payable	239	128	98
Total short -term liabilities	395	427	441
Total liabilities	750	550	544



4.1 Fixed assets

4.1.1. Tangible fixed assets

€'000	2006	2005	2004
Net book value			
Start of the financial year	97	145	170
Investments	158	21	47
Sales and disposals			(6)
Depreciation	(88)	(69)	(66)
Total	167	97	145

Investments in 2006 consist primarily of the laboratory installation costs (39), the building (36), business vehicles (33) and computer equipment (21).

4.1.2. Intangible assets

€'000	2006	2005	2004
Research and development	29	42	42
Patents and licences	8		
Software	17	4	4
Total	54	46	46

Since 2006 research and development expenses have no longer been capitalized. The main investments in 2006 are licence applications (11) and the creation of the website (16).

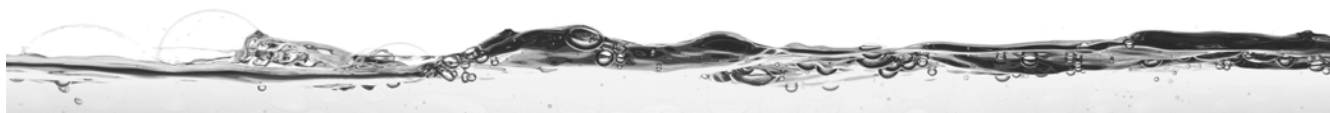
4.1.3. Financial fixed assets

Financial fixed assets consist solely of guarantees given.

4.2 Current assets

4.2.1. Stocks

The stock of Ecodis consists mainly of specific parts used when installing *ecodis*[®] like control boxes, electricity switching boxes, disinfection units, etc.



4.2.2. Trade debtors and other current assets

€'000	2006	2005	2004
Trade debtors (net)	50	131	46
Other receivables	56	9	27
Deferred charges and accrued income	2	4	4
Total	108	143	77

With the fall in sales in the second half of 2006, receivables at 31 December 2006 are down considerably on 2005.

Other receivables consist mainly of recoverable VAT (35).

4.3 Trade and other payables

4.3.1. Overview

€'000	2006	2005	2004
Trade payables	152	278	327
Other taxes and social security liabilities	0	14	16
Remuneration and provisions	112	64	40
Other liabilities	49	40	34
Accrued charges	78	10	7
Total	391	406	424

4.3.2. Trade payables

Trade payables consist mainly of debts to suppliers of goods for resale and investments. The fall is due in particular to Ecodis' favourable liquidity position compared with 2005.

4.3.3. Remuneration and provisions

The rise in social security liabilities is explained by the increased personnel costs.



4.3.4. Other liabilities

The other liabilities are debts to certain bondholders, consisting mainly of unpaid interest on the subordinated loans.

4.3.5. Accrued charges.

Accrued charges consist mainly of rental charges not yet invoiced by the lessor.

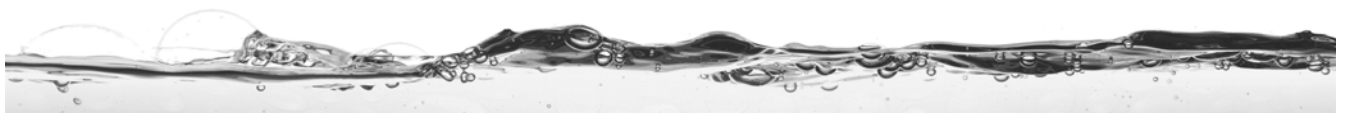
4.4 **Liquidity and capital resources**

4.4.1. Issued capital

On 11 May 2006 capital was increased by EUR 0.726 million by a cash contribution.

4.4.2. Financial debts

In 2006 the subordinated debts were increased by EUR 0.5 million. On top of this an investment credit was concluded with Fortis Bank in an amount of EUR 0.28 million for investments in 2006 and 2007. EUR 0.134 million of this amount was already drawn in 2006.



4.5 Cash flow statement

	2006	200 5	200 4
<u>Cash flows from operating activities</u>			
Net profit/loss after taxes	(1.119)	(492)	(570)
Correction for depreciation /amortization	112	83	78
Cash flows before change in working capital	(1.007)	(409)	(492)
Changes in working capital			
Stocks	(58)	(35)	(47)
Trade receivables	81	(85)	1
Trade payables	(126)	(49)	241
Taxes and social security	35	21	40
Accruals and deferrals	70	3	7
Other amounts receivable	(47)	19	(22)
Other amounts payable	8	8	32
Net cash flows used in operating activities	(1.044)	(527)	(240)
<u>Cash flows from investment activities</u>			
Investments in financial fixed assets	2	(2)	0
Investments in intangible fixed assets	(34)	(14)	(54)
Investments in tangible fixed assets	(158)	(21)	(41)
Cash flows used for investment activities	(190)	(37)	(95)
<u>Cash flows from financing activities</u>			
Increase (decrease) in long -term debt	625	112	50
Increase (decrease) in short -term debt	(17)	5	1
Increase in capital	726	(400)	401
Cash flows from financing activities	1.334	517	452
Cash, cash equivalents and short -term investments at start of period	133	181	64
Cash, cash equivalents and short -term investments at end of period	233	133	181
Change in cash, cash equivalents and short -term investments	100	(47)	117



The above cash flow overview shows that Ecodis NV has generated significant negative operating cash flows since it was set up, owing to investments in refining and improving the *ecodis*[®] technology.

Every year these negative cash flows have been balanced out with new risk capital in the form of subordinated loans or capital increases.

5. *Recent developments*

The most important recent known developments are:

- the continuing broadening and strengthening of the group's management and organization, in particular at commercial level;
- the obtaining of (temporary) certification in the Netherlands and the positive development of the certification procedure in Belgium that is expected at the end of 2007, and
- the planned stock market introduction.

6. *Outlook*

6.1 Introduction

Ecodis' ambition is to become in the longer term *the* reference on the European market for water disinfection. In the short term it intends to concentrate on a limited number of applications, despite having identified a broader range of possibilities.

Right now Ecodis is focusing on completing its current total solution, which is already being used by a number of important customers in various sectors, and which the Company will begin to market on a large scale. At the same time Ecodis will invest further in research and development to adapt the existing solution to other applications, and to further improve its fundamental operation.

In the short term Ecodis will be confronted with start-up losses and investments in building up a structure that can handle the expected rapid growth of activities. This structure will include setting up an internal production and sales apparatus, bolstered if necessary by partnerships.

Ecodis wants to combine the sales of its products with monitoring and after-sales assistance contracts. The related remuneration for the use of its technology will enable Ecodis to evolve to a recurrent income model with better operating margins.



Ecodis expects to reach the EUR 20 million sales mark by 2010 and to continue growing strongly to EUR 63 million by 2012. From 2010 onwards the Company expects to achieve positive operating cash flows. With the help of scale benefits Ecodis' estimates that by 2012 it will reach an EBITDA margin of 22%.

6.2 Outlook 2007-2012

Based on the business plan, the net proceeds of the Offering are expected to be sufficient to finance the negative cash flow between 2007 and 2010. The figures presented are limited therefore to the operating elements.

Overview

Operating result 2007-2012

	2007	2008	2009	2010	2011	2012
Sales	809	3,487	8,358	20,721	36,070	62,317
Operating Expenses	4,475	7,391	10,384	20,309	30,930	48,683
Production	612	1,356	2,973	6,540	11,649	20,131
Installation	477	682	1,218	2,813	4,231	7,290
Services	0	159	333	1,748	3,526	6,609
Sales Organisation	510	722	1,118	2,490	3,705	5,966
Overhead	2,131	2,022	2,675	4,757	5,604	6,427
R&D	745	2,450	2,066	1,961	2,215	2,259
EBITDA	-3,666	-3,904	-2,025	411	5,140	13,634
EBITDA-Margin	-453.1%	-111.9%	-24.2%	2.0%	14.3%	21.9%
Depreciation	149	234	359	484	789	944
EBIT	-3,815	-4,137	-2,384	-72	4,351	12,690
Capex	744	425	625	625	1,525	775
Increase in Working Capital	113	672	931	2,386	3,004	5,260



6.2.2. Sales

Ecodis will be focusing on 4 product groups that it will market in 3 regions (5 countries). The table below indicates in which year Ecodis wishes to launch a given product group in a specific region.

	Tap water	Swimming pools	Cooling systems	Cooling towers
Benelux	2007	2007	2008	2008
France	2010	2009	2010	2010
UK	2009	2009	2010	2010

The underlying fields of application and customer types of the various product groups are discussed in chapter V, 3.7 and can be summarized as follows:

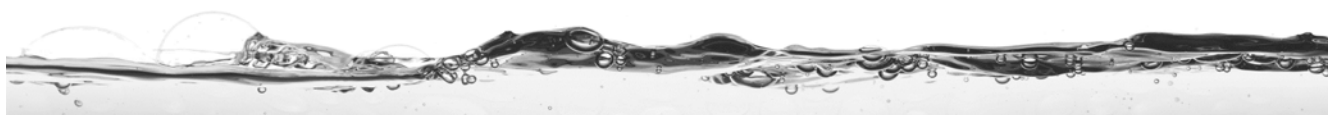
- incoming tap water:
 - legionnaire's disease prevention in hospitals, holiday centres, swimming and sports centres, staff showers, etc.;
 - process water treatment in, among others, the food and pharmaceuticals industry;
- Swimming pools: smaller swimming pools, jacuzzis and whirlpools for private individuals and sports and fitness centres;
- Cooling systems and towers: hospitals, hotels, food industry, etc.

The business plan does not include any sales of products resulting from certain of the Company's R&D efforts, like miniaturization, technology upscaling to larger swimming pools, waste water and other new fields of application like air humidification in air conditioning systems, combinations with membrane technology or food disinfection.

The business plan supposes that the product sales will be realized within a 10-year period following the launch, after which the intended market penetration will be reached. Sales are not, however, evenly distributed over this 10-year period:

- tap water and swimming pools: the bulk of sales ($\pm 65\%$) are planned to occur in years 5-7 of the product cycle;
- cooling systems and towers: the bulk of sales ($\pm 65\%$) are planned to occur in years 8-10 of the product cycle;

Ecodis expects to start obtaining revenues from monitoring and assistance contracts one year after selling the apparatus to the customer. It expects that between 90% and 95% of customers investing in the equipment will conclude such contracts. These revenues are therefore cumulative and recurring.



Finally Ecodis takes a price erosion into account from year 4 after the launch onwards, gradually increasing to 35% to 40% for product sales and to 30% to 43% for monitoring and assistance contracts.

Sales overview by product group, region and type (in EUR 000)

	2007	2008	2009	2010	2011	2012
Tap Water	739	2,490	6,786	16,334	29,889	54,042
Swimming Pools	70	151	485	1,042	1,708	2,813
Cooling Systems	0	282	363	1,115	1,520	2,090
Cooling Towers	0	564	725	2,230	2,953	3,371
TOTAL SALES	809	3,487	8,358	20,721	36,070	62,317
Product Sales	809	3,278	7,269	17,714	28,426	47,241
Services	0	209	1,089	3,007	7,644	15,076
TOTAL SALES	809	3,487	8,358	20,721	36,070	62,317
Belux	342	1,407	2,738	5,573	9,379	15,163
Netherlands	467	2,080	4,060	8,274	13,933	22,532
France	0	0	87	2,516	4,545	8,275
UK	0	0	1,473	4,358	8,214	16,348
TOTAL SALES	809	3,487	8,358	20,721	36,070	62,317

6.2.3. Operating charges

Most of the costs evolve as a function of the number of systems sold. However, a minimum structure is planned for each step in the value chain and in every country, representing a major cost in the first years of launch. As sales and the utilization rates increase, major scale benefits will be achieved.

Given the labour-intensive nature of Ecodis' activity (assembly, pre-installation study and installation at the client's, monitoring of results, interventions), costs consist mainly of personnel costs, both internal and outsourced. In addition Ecodis purchases the hardware and software components of the equipment and incurs facility and personnel-related costs (rent, electricity, etc.).

General charges relate to the Company's head office in Schoten. Here the main cost is management, together with the general marketing efforts for the group. Ecodis will also be setting up regional structures responsible for sales, installation, monitoring and assistance



contracts, to which general management costs will be attached. The general costs will grow step-by-step with growth of the structure. This item includes in 2007 the costs of the initial public offering.

6.2.4. Research and development

Ecodis makes provision for a yearly expenditure on R&D directed at developing new product applications and improving existing applications.

The figures given include product sales of a limited number of these new applications (cooling towers and systems, swimming pools), whereas for research areas like miniaturization and upscaling no revenue is recorded against the expected R&D costs.

The business plan does not include any government grants.

R&D costs that do not relate to facilities (buildings, equipment), i.e. consisting mainly of personnel costs and the costs of external research projects, are charged immediately in the year in which they are incurred, and are therefore not capitalized and amortized.

6.2.5. Investments

Production at Ecodis itself is limited to the assembling components produced externally by order of the Company. Moreover, in the longer term the Company is evolving towards a business model based on income from remuneration for the use of its technology.

The main investments in tangible fixed assets therefore relate to:

- R&D facilities and equipment;
- the head office and the regional structures;
- assembly lines in the production facility.

For the other activities, rental charges and the cost of various necessities are included in the appropriate 'Operating Charges' via an overhead amount per member of personnel. Ecodis will finally make extensive use of external services.



6.3 Statement by the statutory auditor concerning the methodology used for the 2007-2012 business plan

Statutory auditor's report on the agreed upon procedures on the prospective financial information of Ecodis NV

To the members of the Board of Directors,

At your request and pursuant to EU regulation 809/2004, we have prepared the present report on the prospective financial information of Ecodis NV as mentioned in chapter VI of this prospectus.

The above-mentioned projections and major underlying assumptions have been made under your responsibility and in accordance with the provisions of EU regulation 809/2004.

Based on our work we have been asked to give a judgment, pursuant to the provisions of annexe I, item 13.2 of EU Regulation 809/2004, on the proper preparation of the projections. This consists of an appraisal of the procedures used by management in preparing the projections, as well as certain controls to verify that the principles used accord with those used for preparing the financial information of Ecodis NV and its subsidiary. Our procedures consist of gathering the information, declarations and explanations that we deem necessary in order to be able to state with reasonable certainty that the projections have been properly prepared on the basis of the above-mentioned assumptions. We would emphasize that such projections are by nature uncertain, and that the actual results can therefore deviate considerably from these projections. For this reason we are unable to pass any judgement as to the likelihood of these projections being achieved.

In our opinion:

- the projections have been properly prepared on the basis of the indicated principles;
- the accounting basis for preparing the projected results is in accordance with the financial reporting principles of Ecodis NV and of its subsidiary.

This report is intended for the Board of Directors in connection with the intended capital increase via a public issue of shares on Alternext Brussels, and may not be used for other purposes.

18 May 2007

VMB Bedrijfsrevisoren CVBA
Represented by Alain Bolssens



Chapter VII: Financial information

1. *Introduction*

The present chapter presents the audited consolidated financial statements of Ecodis at 31 December 2006 with comparable unconsolidated figures for 2005. The consolidated financial statements at 31 December 2006 have been prepared according to Belgian accounting principles.

2. *Consolidated financial statements of Ecodis NV for the financial year ended 31 December 2006*

2.1 Consolidation scope and consolidation methods

Full consolidation

The full consolidation method is used whenever the subsidiary is controlled by the parent company, that is:

- either the parent company owns directly or indirectly over 50% of the capital;
- or the parent company has control of the management bodies of the company in question.

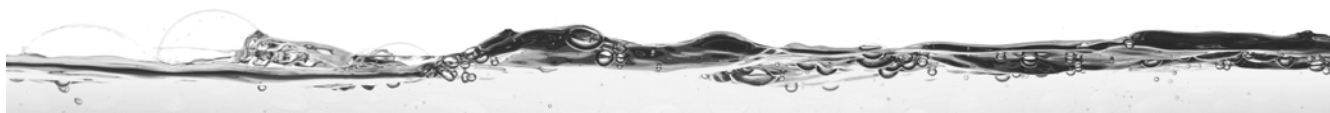
This method consists of adding to the financial statements of the parent company all the assets and liabilities of the consolidated subsidiaries, thereby replacing the carrying amount of this participating interest as shown in the unconsolidated accounts.

This method includes determining the consolidation difference (goodwill) and minority interests .

In the same way the different cost and income items of these subsidiaries are added to those of the parent company, with the results for the financial year divided into those attributable to the shareholders of the parent company and into minority interests.

The first consolidation of Ecodis took place on 31 December 2006 and includes a single subsidiary, Ecodis BV. This latter company was constituted on 16 November 2006. Consequently, the comparative figures as of 31 December 2005 correspond entirely with the unconsolidated statutory financial statements of Ecodis.

Any consolidation differences arising in the future from possible acquisitions will be amortized over 10 or 20 years depending on the useful life of the goodwill of the acquired activities.



Proportional consolidation

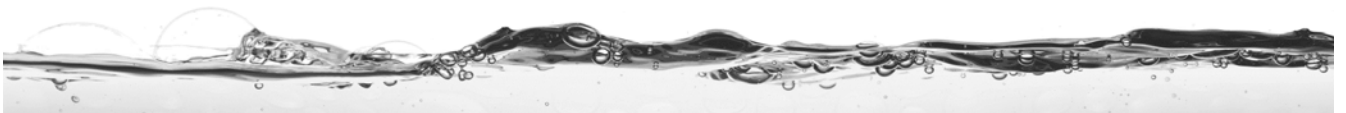
The method does not apply to the present consolidation.

Consolidation by the equity method

The method does not apply to the present consolidation.

Elimination of internal transactions

Internal group transactions that influence the assets and liabilities, such as participating interests, payables and receivables, as well as results, are eliminated in the full consolidation.

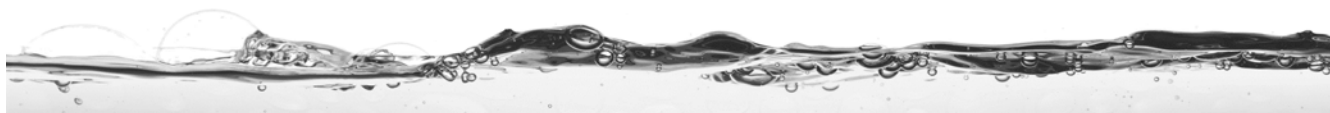


2.2 Consolidated balance sheets at 31 December 2005 and 2006.

ASSETS	31 December 2005	31 December 2006
FIXED ASSETS	145,662	223,124
II Intangible fixed assets	45,482	54,251
IV Tangible fixed assets	96,595	166,914
B. Plant, machinery and equipment	60,848	47,788
C. Furniture and vehicles	12,276	49,969
D. Leasing and similar rights	12,759	5,060
E. Other tangible fixed assets	10,712	64,097
V Financial fixed assets	3,585	1,959
C. Other financial fixed assets	3,585	1,959
2. Amounts receivable and cash guarantees	3,585	1,959
CURRENT ASSETS	404,556	527,140
VII Stocks and contracts in progress	127,856	185,518
A. Stocks	127,856	185,518
4. Goods for resale	127,856	185,518
VIII Amounts receivable within one year	139,872	106,478
A. Trade debtors	130,811	49,991
B. Other amounts receivable	9,061	56,487
IX Short-term investments	65,794	22,541
X Cash and cash equivalents	67,274	210,651
XI Deferred charges and accrued income	3,760	1,953
TOTAL ASSETS	550,218	750,265

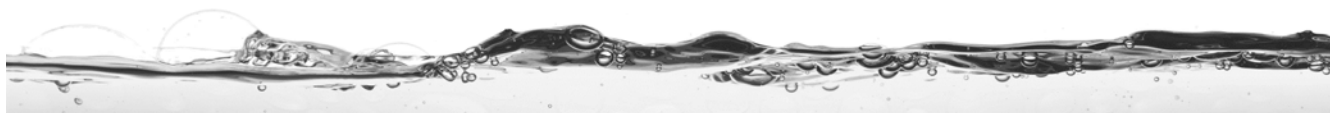


LIABILITIES	31 December 2005	31 December 2006
SHAREHOLDERS' EQUITY	(135,830)	(529,503)
I Capital	734,000	1,459,560
A. Issued capital	734,000	1,459,560
B. Uncalled capital		
II Issue premiums	566,000	566,000
IV Consolidated reserves	(1,435,830)	(2,555,064)
LIABILITIES	676,478	1,201,975
X Amounts payable after more than one year	258,911	884,291
A. Financial debts	258,911	884,291
1. Subordinated loans	125,000	750,000
3. Leasing and similar obligations	8,911	4,365
4. Credit institutions		129,926
5. Other loans	125,000	
XI Amounts payable within one year	417,567	317,684
A. Amounts payable after one year	21,363	4,131
B. Financial debts		
C. Trade debts	277,944	152,414
1. Suppliers	277,944	152,414
E. Taxes, remuneration and social security	77,502	112,399
F. Other amounts payable	40,758	48,740
XII Accrued charges and deferred income	9,570	77,793
TOTAL LIABILITIES	550,218	750,265



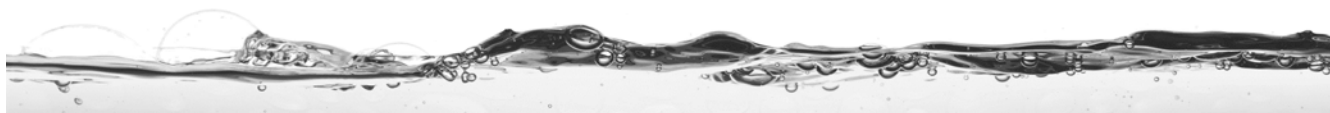
2.3 Consolidated income statements for the years ended 31 December 2005 and 2006.

INCOME STATEMENT	31 December 2005	31 December 2006
Operating income	579,901	401,011
A. Turnover	562,440	373,167
D. Other operating income	17,461	27,845
Operating charges (-)	(1,059,942)	(1,492,302)
A. Raw materials . consumables and goods for resale	(267,568)	(214,299)
1. Purchases	(303,063)	(271,961)
2. Increase/decrease in stocks	35,495	57,663
B. Services and other goods	(377,384)	(497,611)
C. Remuneration , social security costs and pensions	(327,659)	(661,502)
D. Depreciation and amounts written off fixed assets	(83,802)	(112,424)
G. Other operating charges	(3,528)	(6,468)
Operating loss	(480,041)	(1,091,291)
Financial income	2,339	2,257
B. Income from current assets	2,327	2,253
C. Other financial income	11	4
Financial charges (-)	(14,002)	(30,200)
A. Interest and other debt charges	(11,450)	(20,563)
C. Other financial charges	(2,552)	(9,637)
Loss for the financial year	(491,705)	(1,119,234)



2.4 Cash flow statement 2006

CASH FLOW ANALYSIS	31 December 2006 (12 months)
<u>Cash flows from operating activities</u>	
Net profit/loss after taxes	(1,119,234)
Correction for depreciation/amortization	112,424
Cash flows before change in working capital	(1,006,810)
Changes in working capital	
Stocks	(57,663)
Trade receivables	80,820
Trade payables	(125,530)
Taxes and social security	34,897
Accruals and deferrals	70,030
Other amounts receivable	(47,426)
Other amounts payable	7,983
Net cash flows used in operating activities	(1,043,699)
<u>Cash flows from investment activities</u>	
Investments in financial fixed assets	1,626
Investments in intangible fixed assets	(33,547)
Investments in tangible fixed assets	(157,965)
Cash flows used for investment activities	(189,886)
<u>Cash flows from financing activities</u>	
Increase (decrease) in long-term debt	625,380
Increase (decrease) in short-term debt	(17,232)
Increase in capital	725,560
Cash flows from financing activities	1,333,708
Cash, cash equivalents and short-term investments at start of period	133,069
Cash, cash equivalents and short-term investments at end of period	233,192
Change in cash, cash equivalents and short-term investments	100,123



2.5 Valuation rules

2.5.1. Valuation of the assets

Formation expenses

Formation expenses are valued at acquisition value and fully expensed in the year in which they incurred.

Consolidation differences (goodwill)

Consolidation differences are the differences that cannot be allocated to specific asset and liability items between the value of the participating interest in the equity of the consolidated companies and the acquisition value of these participating interests.

Positive differences are shown separately on the asset side of the balance sheet under heading III “consolidation differences” and negative differences are shown separately on the liabilities side of the balance sheet under heading V “consolidation differences”.

Consolidation differences are amortized over 10 or 20 years depending on their useful life.

Intangible fixed assets

Intangible fixed assets consist of EUR 0.06610073 million of research and development costs. These costs are being amortized over 5 years. It has been decided not to capitalize any more research and development costs from 2006 onwards. The costs of licences and patents are capitalized and written off over a three-year period.

Tangible fixed assets

Tangible fixed assets are valued at their acquisition value. Additional related costs are charged directly to income. Internally produced fixed assets, and in particular installations put together for hire or used for demonstration purposes, are capitalized, in an amount equal to their direct costs, under other tangible fixed assets.



All tangible fixed assets are depreciated on a straight-line basis as follows:

Plant, machinery and equipment	20 % a year
Computers, printers, copiers	33.33%
Vehicles	20%
Office equipment and furniture	20%
Other tangible fixed assets	33.33%

Financial fixed assets

Participating interests and shares included under this heading are written down in the event of capital losses or permanent reductions in value that are justified by the situation, the profitability or the prospects of the enterprise in which the participating interest or shares are held.

Receivables included under this heading are written down whenever their repayment at due date is uncertain or unlikely.

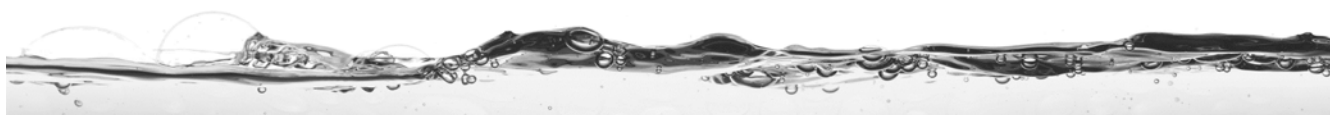
Stocks

Stocks are valued at the lower of acquisition value, calculated using the weighted average price, or market value. Stocks can also be broken down into the following components:

1. Raw materials and consumables;
2. Work in progress – completed products;
 - The manufacturing cost of products does not include the indirect production costs;
 - The manufacturing costs of products where production covers more than one year do not include financial costs linked to the capital borrowed to finance production;
3. Goods for resale;
4. Orders in progress.

Orders in progress

Orders in progress are valued at manufacturing cost by the completed contract method. This means that the profit is recognized only at the end of the contract unless before such time the contract appears to be loss-making, in which case the entire loss on the contract should be charged to income at that time.



Amounts receivable after one year and within one year

Amounts receivable within or after one year are recorded in the balance sheet at their nominal value and are written down in the event that their repayment at due date is partially or totally uncertain or unlikely.

2.5.2. Valuation of liabilities

Provisions for liabilities and charges

Every year the board of directors evaluates the required provisions conservatively, sincerely and in good faith. These provisions are individualized as a function of the nature of the risks and charges they are intended to cover. They are reversed whenever, at the end of the financial year, they exceed a current assessment of the risks and charges for which they were set up.

Amounts payable after one year and within one year

Amounts payable are recorded at nominal value.

2.5.3. Revaluation

Tangible fixed assets, participating interests and shares included under financial fixed assets are not revalued.

2.5.4. Foreign currency

Receivables and payables in foreign currency are recorded at the exchange rate prevailing at the time of recording. Receivables and payables denominated in foreign currency are converted at the end of the financial year at the closing rate, except where the exchange rate is specifically guaranteed. The resulting translation differences are taken into the income statement whenever the translation gives rise to a negative difference. Any positive differences are accounted for under deferred income.



2.5.5. Recognition of turnover on orders in progress

Ecodis generally undertakes projects at a fixed contract price agreed with the customer.

In this case the work volume is estimated by the project leaders, allowing a project budget to be calculated. The contract includes an invoicing plan based on deliveries to the customer. Typically payment is organized in stages: (i) advance payment, (ii) delivery of the installation, (iii) commissioning of the installation.

Projects in progress are valued by the completed contract method. This means that, based on the accounting principles as applied by the company, ongoing projects valued in this way are recorded under orders in progress (asset) and under prepayments received (liability).

At 31 December 2005 and 2006 there were no orders in progress.

2.5.6. Deferred taxation

Where this appears necessary, provisions for deferred taxes are included under liabilities. These deferred taxes are calculated at the tax rate that will probably apply at the time when these timing differences cease to exist. The group does not record deferred tax assets.

3. *Notes to the consolidated financial statements*

1. Companies included in the full consolidation

List of consolidated subsidiaries

Name & address	Percentage of capital held
Ecodis BV Munnikenheiweg 47 G 4879 NE Etten-Leur Netherlands	100 %

This company was constituted on 16 November 2006. For this reason it has only a limited influence on the consolidated figures at 31 December 2006. The negative impact of this subsidiary in the consolidated net results at 31 December 2006 is EUR 0.056441 million.

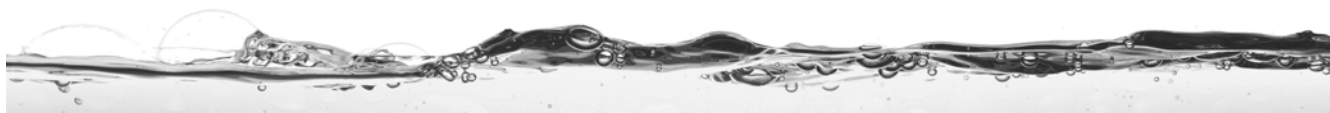


VII. Statement of formation expenses

STATEMENT OF FORMATION EXPENSES	31 December 2006
Net book value at the end of previous financial year	0
Changes during the financial year:	
- New costs during the year	4,493
- Amortization	(4,493)
Net book value at the end of the financial year	0

VIII. Statement of intangible fixed assets

STATEMENT OF INTANGIBLE FIXED ASSETS	1. R & D costs	2. Licences and patents	TOTAL
a) Acquisition cost			
- At the end of the previous financial year	66,101	6,269	72,369
- Acquisitions	0	29,054	29,054
- At the end of the financial year	66,101	35,323	101,423
c) Amortization and amounts written down			
- At the end of the previous financial year	(24,237)	(2,651)	(26,887)
Changes during the financial year:			
- Recorded	(13,220)	(7,065)	(20,285)
- At the end of the financial year	(37,457)	(9,715)	(47,172)
d) Net book value at the end of the financial year: (a)-(c)	28,644	25,607	54,251



IX. Statement of tangible fixed assets

STATEMENT OF TANGIBLE FIXED ASSETS	2. Plant, machinery and equipment	3. Furniture and vehicles	4. Leasing and similar rights	5. Other tangible fixed assets	TOTAL
a) Acquisition cost					
- At the end of the previous financial year	157,560	32,149	63,649	32,136	285,494
Changes during the financial year:					
- Acquisition	28,683	53,404	0	75,878	157,965
- At the end of the financial year	186,243	85,553	63,649	108,014	443,459
c) Depreciation and amounts written down					
- At the end of the previous financial year	96,712	19,874	50,889	21,424	188,899
Changes during the financial year:					
- Recorded	41,743	15,710	7,700	22,492	87,645
- At the end of the financial year	138,455	35,584	58,589	43,916	276,544
d) Net book value at the end of the financial year: (a)-(c)	47,788	49,969	5,060	64,098	166,915

X. Statement of financial fixed assets

STATEMENT OF INTANGIBLE FIXED ASSETS	
2. Amounts receivable	
At the end of the previous financial year	3,585
- Reimbursements	(1,626)
Net book value at the end of the financial year	1,959



XI. Statement of consolidated reserves

STATEMENT OF RESERVES

Enterprises	Reserves 01.01.2006	Result 31.12.2006	Reserves 31.12.06
Ecodis NV	(1,435,831)	(1,062,772)	(2,498,603)
Ecodis BV	0	(56,461)	(56,461)
TOTAL	(1,435,831)	(1,119,233)	(2,555,064)

XIII. Statement of amounts payable after one year

A. Breakdown of amounts originally payable after one year, by residual term

STATEMENT OF AMOUNTS PAYABLE	Maturing within one year	> 1 year < 5 years	TOTAL
Leasing and similar obligations	4,131	4,365	8,496
Credit institutions		129,926	129,926
Subordinated loans		750,000	750,000
TOTAL	4,131	884,291	888,422

B. Amounts payable guaranteed by real guarantees given or irrevocably promised on the assets of companies included in the consolidation – leasing and similar obligations

Leasing and similar obligations		4,365	4,365
TOTAL		4,365	4,365

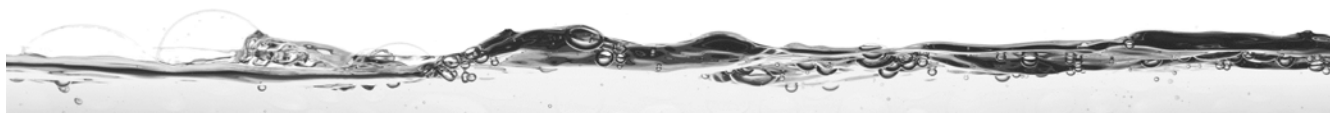


XIV. Results

		31.12.2006	31.12.2005
A.	Total group turnover in Belgium	331,961	475,473
B.	Average number of persons employed and personnel charges		
B11.	Average number of persons employed		
	White-collar employees	13.4	6.4
B12.	Personnel charges		
	Remuneration and social security	641,572	316,496
	Other personnel charges	15,131	11,163
	Pensions	4,799	0
B13.	Average number of persons employed in Belgium by Group companies	12.9	6.4

XV. Rights and obligations not included in the balance sheet

Rights and obligations not included in the balance sheet	
A. Pledging of business assets	
Amount of the registered pledge	446,000
C. Other major obligations	
the group has a total future rental obligation of EUR 79,400	
D. Commitments to pay retirement and survivors' pensions in favour of personnel or executives, at the expense of the enterprises included in the consolidation	
The company has concluded a supplementary retirement and survivors' pension with the Integrale Maatschappelijke Verzekeringskas The pension contribution payable by Ecodis NV is 0.5% of the employees' annual pay.	



4. Board of Directors' report on the consolidated financial statements for the financial year on 31 December 2006.

I. Commentary on the consolidated financial statements

The consolidated turnover of Ecodis fell in 2006 compared with 2005. This is due mainly to the fact that in 2006 Ecodis gave top priority to product development. The main objective in 2006 was to further develop and refine the *ecodis*® applications so that the company would be ready in 2007 to generate turnover in various sectors. Given the somewhat limited number of employees and the company's priority, Ecodis necessarily had to rein in sales. With the lower turnover and the building up of the personnel structure since mid-2006, the consolidated operating loss has increased to EUR 1.091291 million. Ecodis has invested heavily in its commercial organization in terms of salespersons and project management, and at the same time increased its advertising and marketing expenditure. The fruits of these investments will be reaped in the coming years.

II. Key events after balance sheet closing date

No significant events have taken place since the balance sheet date. In January 2007 the risk capital was increased by the issue of an additional EUR 0.25 million subordinated bond.

III. Development of the company – main risks and uncertainties

The human capital of Ecodis is an essential element in its corporate sustainability. Employee loyalty is of vital importance for achieving the intended growth. The growth of Ecodis will depend on its being able to integrate a significant number of highly qualified employees. Important elements here are Ecodis recruitment strategy and its attractiveness, but there is no guarantee that it will be able to attract the right employees in a timely fashion.

Risks attached to growth expectations

Internal growth

The accelerated development of applications and the ever-larger size of projects require Ecodis to carefully manage its growth.

Proper growth management requires Ecodis to continue to develop its financial, operational and control procedures.



External growth through acquisitions

Ecodis wishes to achieve its growth in part by acquiring companies having competences which complement its own internally developed ones.

The risks attached to these transactions can involve personnel (loyalty of the employees and management of acquired companies), organization (integration of acquired companies), any liabilities of the acquired companies, and delays in the realization of the synergy effects.

Ecodis will, by gathering specialist advice with respect to these transactions, develop its own methodology for limiting the risks inherent in external growth and the related reorganizations. The company cannot, however, guarantee that, should an acquisition develop unfavourably, this will not have adverse effects on the results or financial situation of Ecodis.

Key events occurring after the end of the year that can have a significant effect on the development of Ecodis NV.

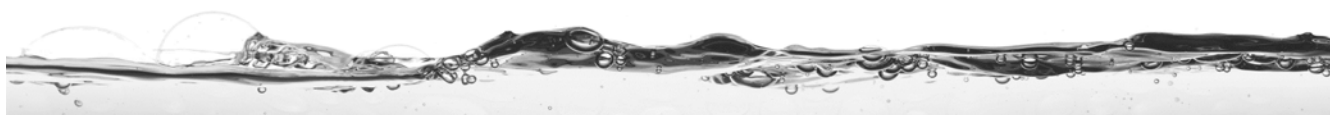
The shareholders and the board of directors have decided to support the further growth of Ecodis with a significant capital increase by means of a stock market introduction. This introduction should allow Ecodis to convert its unique technology into a number of applications and then launch various products on the European market. This capital operation should also allow Ecodis NV to finance targeted acquisitions.

IV. Research and development

During the past financial year the company has undertaken research and development in order to further develop the product known as *ecodis*®.

In addition to this, various activities have taken place that have made a major contribution to further research and development. Without giving an exhaustive list of all these activities, we can mention the following most important of them:

- achieving certification and continuing certification work;
- following up study projects in cooperation with the universities;
- developing a proprietary modular power supply;
- modulation and standardization of electrical control boxes;
- software development;
- carrying out and assessing tests at customer sites;
- research and preparation work on patents.



V. Extraordinary activities and special assignments of the statutory auditor

In the course of the financial year, extraordinary activities and special assignments were entrusted to the statutory auditor of the company in an amount of EUR 0.003250 million. The statutory auditor's fee for its regular work was EUR 0.008500 million.

VI. Going concern

Pursuant to articles 633 and 634 of the Companies Code, the Board of Directors wishes to draw attention to the fact that, as a result of the losses incurred in the financial year ending on 31 December 2006, the net assets of the company have fallen to below the minimum company capital (EUR 61,500). The net assets at 31 December 2006 were a negative - EUR 473,041.70. The consolidated net assets at that date amounted to EUR 529,503.

As already mentioned above the losses are due to the expansion of Ecodis's structure, and in particular the recruitment of new personnel, with remuneration doubling in 2006 compared with 2005. To meet capital needs in 2006, capital was increased by EUR 725,560.32 and a subordinated bond was issued in an amount of EUR 750,000. The total consolidated risk-bearing capital (including subordinated bonds) amounted to EUR 220,497 at 31 December 2006, and was increased by EUR 250,000 after year-end (see above).

Bearing in mind the capital needed from hereon out for the further introduction and marketing of *ecodis*[®], it was decided to investigate various financing scenarios (private placement, flotation, venture capital, etc.) and a business plan was drawn up, mapping out Ecodis' future prospects and capital needs.

The expected positive development of sales, due in part to the introduction of *ecodis*[®] in the Netherlands and the strengthening of capital, should lead to a recovery in the company's financial situation, thereby justifying the application of the valuation rules on a going concern basis.

IX. Discharge to the directors and statutory auditor

In accordance with the law and the articles of association you are requested to approve the consolidated financial statements and to grant discharge to the directors and the statutory auditor in respect of the exercise of their office in 2006.

Sincerely,

ANEL BVBA
represented by its permanent representative
Elmar Peters
Managing Director



5. *Statutory Auditor's report to the General Meeting of shareholders of Ecodis NV on the consolidated annual accounts for the financial year ended 31 December 2006. (free translation of the original in Dutch)*

In accordance with legal and statutory requirements, we are pleased to report to you on the performance of the audit mandate which was entrusted to us. This report contains our opinion on the consolidated annual accounts and the required additional statements.

Unqualified audit opinion on the consolidated annual accounts with an explanatory paragraph

We have audited the consolidated annual accounts of ECODIS NV (“the company”) and its subsidiary (together “the group”) for the financial year ended 31 December 2006, prepared in accordance with Belgian accounting principles, with a balance sheet total of EUR 0.75 million and with an income statement closing with a loss (group's share) for the financial year of EUR 1.119 million.

The preparation of the consolidated annual accounts is the responsibility of the board of directors. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of the consolidated annual accounts that are free of material misstatements, whether due to fraud or error, selecting and applying appropriate accounting policies, and making accounting estimates that are reasonable in the circumstances.

It is our responsibility to express an opinion on these consolidated annual accounts based on our audit. We conducted our audit in accordance with the legal requirements and with the auditing standards applicable in Belgium as published by the Instituut der Bedrijfsrevisoren / Institut des reviseurs d'entreprises. These standards require that we plan and perform our audit to obtain reasonable assurance that the consolidated annual accounts are free from material misstatement.

In accordance with these auditing standards we have performed procedures to obtain audit evidence on the amounts and disclosures contained in the consolidated annual accounts. The procedures selected depend on our judgment, including the assessment of the risk of material misstatement of the consolidated annual accounts, whether due to fraud or error. In making those risk assessments we consider internal control of the group with regard to the preparation and fair presentation of the consolidated annual accounts in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion as to the effectiveness of the internal control of the group.

We have also evaluated the appropriateness of accounting policies used and the reasonableness of the accounting estimates made by the company, as well as the overall presentation of the consolidated annual accounts. Finally, we have obtained from the board of directors and the management of the company the information and explanations necessary for our audit procedures. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a reasonable basis for our opinion.



In our opinion the consolidated annual accounts give a true and fair view of the financial position of the group as of 31 December 2006 , and of its financial performance for the year then ended, in accordance with the accounting principles generally accepted in Belgium.

As shown in the consolidated annual financial statements the group has suffered considerable losses that affect the group's financial position. The consolidated annual accounts are prepared on a going concern basis. Based on the present business plan such an assumption is justified only in so far as the group is able to attract additional financing resources. Without jeopardizing the above unqualified opinion, we draw your attention to the consolidated annual report, in which the Board of Directors, in accordance with the legal obligations applicable in Belgium, justifies the application of the valuation rules on the assumption of going concern.

Additional statements

The preparation and the content of the consolidated annual accounts are the responsibility of the board of directors.

It is our responsibility to supplement our report with the following additional statements which do not modify our opinion on the consolidated annual accounts:

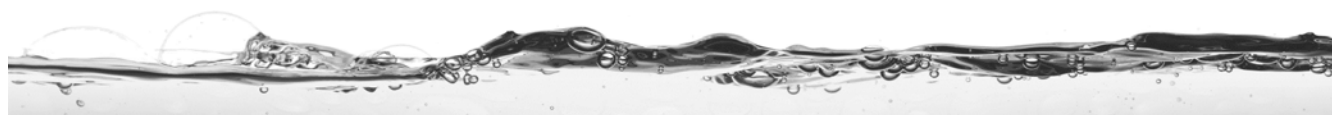
The consolidated annual report covers the information required by law and is consistent with the consolidated annual accounts. We are, however, unable to express an opinion on the description of the principal risks and uncertainties which the group is facing, of its state of affairs, its foreseeable evolution or the significant influence of certain facts on its future development. We can nevertheless confirm that the information given does not present any obvious inconsistencies with the information available to us in the context of our engagement.

The statutory auditor

VMB Bedrijfsrevisoren

Represented by Alain Bolssens

19 April 2007



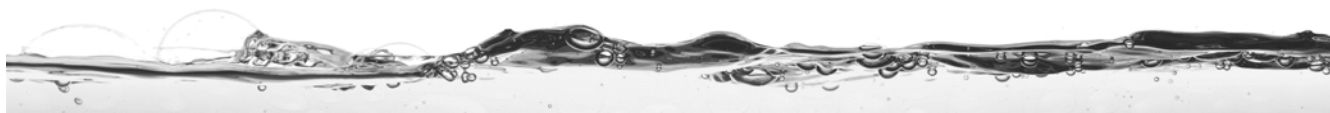
6. Statutory balance sheet and income statement of Ecodis NV for the financial years 2004, 2005 and 2006 (in EUR '000)

6.1 Statutory balance sheets

ASSETS		31 December 2004	31 December 2005	31 December 2006
	FIXED ASSETS	193	146	241
II	Intangible fixed assets	46	45	54
IV	Tangible fixed assets	145	97	167
	B. Plant, machinery and equipment	78	61	48
	C. Furniture and vehicles	15	12	50
	D. Leasing and similar rights	31	13	5
	E. Other tangible fixed assets	21	11	64
V	Financial fixed assets	1	4	20
	C. Other financial fixed assets	1	4	20
	2. Amounts receivable and cash guarantees	1	4	20
	CURRENT ASSETS	351	405	509
		0	0	0
VII	Stocks and contracts in progress	92	128	186
	A. Stocks	92	128	186
	1. Raw materials and consumables	92	128	186
VIII	Amounts receivable within one year	73	140	106
	A. Trade debtors	46	131	50
	B. Other amounts receivable	27	9	56
IX	Short-term investments	119	66	5
X	Cash and cash equivalents	62	67	211
XI	Deferred charges and accrued income	4	4	2
	TOTAL ASSETS	544	550	750

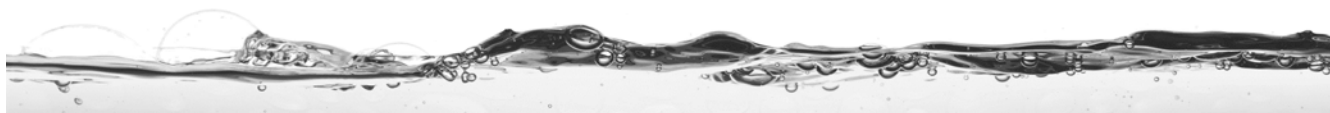


LIABILITIES	31 December 2004	31 December 2005	31 December 2006
EQUITY	(44)	(136)	(473)
I. Capital	334	734	1,460
A. Issued capital	334	734	1,460
B. Uncalled capital			
II. Issue premiums	566	566	566
IV. Profit/(loss) carried forward	(944)	(1,436)	(2,499)
CREDITORS	580	676	1.146
X. Amounts payable after one year	147	259	884
A. Financial debts	147	259	884
1. Subordinated loans		125	750
3. Leasing and similar obligations	22	9	4
4. Credit institutions	0	0	130
5. Other loans	125	125	0
XI. Amounts payable within one year	433	418	261
A. Amounts payable after one year	16	21	4
B. Financial debts	0	0	0
C. Trade debts	327	278	143
1. Suppliers	327	278	143
E. Taxes, remuneration and social security	56	78	65
F. Other amounts payable	34	41	49
X. Accrued charges and deferred income	8	10	78
TOTAL LIABILITIES	544	550	750



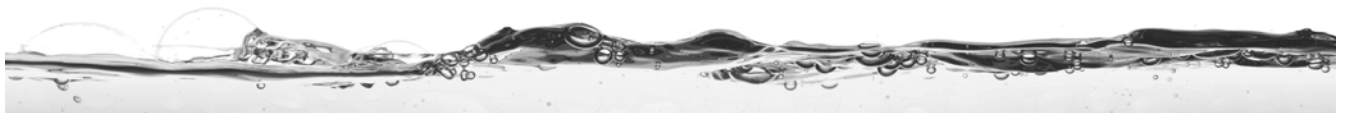
6.2 Statutory income statements

INCOME STATEMENT	31 December 2004	31 December 2005	31 December 2006
Operating income	232	580	401
A. Turnover	189	562	373
C. Fixed assets – own production	32	0	0
D. Other operating income	11	17	28
Operating charges (-)	(791)	(1,060)	(1,436)
A. Raw materials, consumables and goods for resale	(168)	(268)	(214)
1. Purchases	(215)	(303)	(272)
2. Increase/decrease in stocks	47	35	58
B. Services and other goods	(309)	(377)	(489)
C. Remuneration, social security costs and pensions	(233)	(328)	(614)
D. Depreciation and amounts written off fixed assets	(78)	(84)	(112)
G. Other operating charges	(2)	(4)	(6)
Operating loss	(558)	(480)	(1,035)
Financial income	1	2	2
B. Income from current assets	1	2	2
C. Other financial income	0	0	0
Financial charges (-)	(11)	(14)	(30)
A. Interest and other debt charges	(11)	(11)	(21)
C. Other financial charges	(0)	(3)	(10)
Extraordinary result	(1)	0	0
Loss for the financial year	(570)	(492)	(1,063)



6.3 Statutory statement of changes in equity

Changes in equity (in Euro)	Capital	Issue Premiums	Result	Total	Nr of Shares
Shareholder Equity per 1/1/2004	283,600	216,401	-374,193	125,808	2,836
Changes 2004	50,400	349,599	-569,932	-169,933	504
Shareholder Equity per 31/12/2004	334,000	566,000	-944,125	-44,125	3,340
Changes 2005	400,000		-491,704	-91,704	445
Shareholder Equity per 31/12/2005	734,000	566,000	-1,435,829	-135,829	3,785
Changes 2006	725,560		-1,062,772	-337,212	4,531,215
Shareholder Equity per 31/12/2006	1,459,560	566,000	-2,498,601	-473,041	4,535,000



6.4 Statutory cash flow statement

	2006	2005	2004
<u>Cash flows from operating activities</u>			
Net profit/loss after taxes	(1,063)	(492)	(570)
Correction for depreciation/amortization	112	83	78
Cash flows before change in working capital	(951)	(409)	(492)
Changes in working capital			
Stocks	(58)	(35)	(47)
Trade receivables	81	(85)	1
Trade payables	(135)	(49)	241
Taxes and social security	(12)	21	40
Accruals and deferrals	70	3	7
Other amounts receivable	(47)	19	(22)
Other amounts payable	8	8	32
Net cash flows used in operating activities	(1,044)	(527)	(240)
<u>Cash flows from investment activities</u>			
Investments in financial fixed assets	(16)	(2)	0
Investments in intangible fixed assets	(34)	(14)	(54)
Investments in tangible fixed assets	(158)	(21)	(41)
Cash flows used for investment activities	(208)	(37)	(95)
<u>Cash flows from financing activities</u>			
Increase (decrease) in long-term debt	625	112	50
Increase (decrease) in short-term debt	(17)	5	1
Increase in capital	726	400	401
Cash flows from financing activities	1,334	517	452
Cash and cash equivalents at start of period	133	181	64
Cash and cash equivalents at end of period	215	133	181
Change in cash and cash equivalents	82	(47)	117



6.5 Statutory auditor's report on the unconsolidated financial data of ECODIS NV for the financial years ended 31 December 2006, 2005 and 2004.

To the members of the Board of Directors,

At you requested we have audited the unconsolidated financial data of ECODIS NV for the financial years ended on 31 December 2006, 2005 and 2004 as included in Chapter VI.6 of the Prospectus. The present report contains our opinion as to the true and fair view provided by these financial data.

Qualified audit opinion on the financial information with an explanatory paragraph

We have audited the financial information for the financial years ended on 31 December 2006, 2005 and 2004, prepared in accordance with Belgian accounting principles. These financial data contain the balance sheets at 31 December 2006, 2005 and 2004, and the income statements and the cash flow statements for the financial years then ended. The balance sheet totals at 31 December 2006, 2005 and 2004 amounted to EUR 0.75 million, EUR 0.550 million and EUR 0.544 million respectively, and the income statements for the financial years then ended closed with losses of EUR 1.063 million, EUR 0.492 million and EUR 0.570 million respectively.

The preparation of the financial data is the responsibility of the board of directors. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation and fair preparation of the financial data that are free of material misstatements, whether due to fraud or error, selecting and applying appropriate accounting policies, and making accounting estimates that are reasonable in the circumstances.

It is our responsibility to express an opinion on these financial data on the basis of our audit. We have conducted our audit in accordance with the legal requirements and with the auditing standards applicable in Belgium as published by the Instituut der Bedrijfsrevisoren / Institut des reviseurs d'entreprises. These standards require that we plan and perform our audit so as to obtain reasonable assurance that the financial data are free of material misstatement, whether due to fraud or error.

In accordance with these standards we have considered the company's administrative and accounting organisation as well as its internal control procedures. We have obtained from management and from the board of directors the information and explanations required for our audit. We have examined, on a random sample basis, the evidence supporting the amounts recorded in the financial data. At the same time we have evaluated the appropriateness of the accounting policies used and the reasonableness of the significant accounting estimates made by



the company, as well as overall presentation of the financial data. We believe that the audit evidence we have obtained provide a reasonable basis for our opinion.

The balance sheets at 31 December 2003 and 2004 include stocks amounting to EUR 0.045 million and EUR 0.092 million respectively. These stocks were not physically controlled by means of stocktaking either by another company auditor or the company management. Given that these data precede our appointment, we were unable to audit the quantities reported. Furthermore it was impossible to audit the quantities at these dates by means of other audit procedures.

In our opinion, subject to the impact, if any, on the balance sheets and the income statements of adjustments that might be necessary with respect to stocks the financial data relating to the financial years ended 31 December 2006, 2005 and 2004 give a fair and true view of the assets and liabilities and the results of ECODIS NV, in accordance with accounting principles generally accepted in Belgium.

As shown in the financial data the company has suffered considerable losses that affect its financial situation. The financial data are prepared on a going concern basis. Based on the present business plan such an assumption is justified only in so far as the company is able to attract additional financing resources.

This report is intended for the Board of Directors in the context of the intended capital increase via a public issue of shares on Alternext Brussels, and may not be used for other purposes.

The statutory auditor
VMB Bedrijfsrevisoren
Represented by Alain Bolssens
18 May 2007



7. *Analysis of the difference between Belgian Accounting Principles (BGAAP) and International Financial Reporting Standards (IFRS)*

Introduction

The consolidated annual accounts for the financial year ended 31 December 2006 have been prepared in accordance with Belgian accounting standards (BGAAP).

In the light of the introduction on Alternext Brussels and on the international investing public, Ecodis NV has, for information purposes only, quantified the differences between BGAAP and IFRS as shown in the table below. In preparing this analysis no use has been made of the exemptions permitted by IFRS 1 – ‘First-time Adoption of International Financial Reporting Standards’.

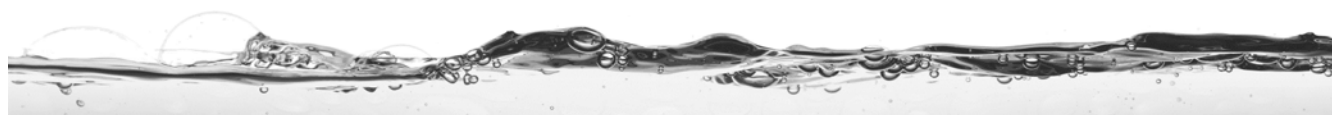
SUMMARY ANALYSIS OF DIFFERENCES	CONSOLIDATED EQUITY AT PER 31/12/2005	CONSOLIDATED NET RESULT FOR FY 2006	CAPITAL INCREASES AND OTHER ADJUSTMENTS TO EQUITY DURING THE FINANCIAL YEAR	CONSOLIDATED EQUITY AT 31/12/2006
Belgian GAAP	(135,830)	(1,119,234)	725,560	(529,503)
Warrants attached to subordinated bond loans	0	(11,875)	230,243	218,368
Share-based payments	0	(312,605)	338,789	26,184
Research & Development costs	(46,358)	9,230	0	(37,127)
Website costs	0	(12,800)	0	(12,800)
Impact	(46,358)	(328,050)	569,032	194,625
IFRS	(182,188)	(1,447,283)	1,294,592	(334,879)

Warrants linked to subordinated bonds

Upon issue of the Company’s bond loan, warrants were granted to subscribers. These warrants have been valued separately as the difference between the present value of the bond loan and the nominal value at the time of subscription. Consequently, pursuant to IAS 32 and IAS 39, the bond loan has been split into a financial debt and an equity portion in the value of the warrants. These warrants were exercised and the bond loan was repaid.

Share-based payments

Ecodis has set up warrant schemes in favour of the employees, directors and consultants of the Company and its subsidiaries. The costs related to these warrants have been established on the basis of the fair value of the warrants at their respective allotment dates. The total amount of the costs calculated, pursuant to IFRS 2, are expensed over the vesting period of the respective warrants or during the service period, depending on the beneficiary.



Research and development costs

In the consolidated annual accounts a number of research and development costs have been capitalized and amortized. IAS 38 requires research costs to be charged directly to income and development costs to be capitalized in so far as they meet a number of conditions such as the accurate measurability of the costs in question. This latter condition has been deemed not to have been fulfilled. For this reason the intangible fixed assets have been charged to income.

Website costs

The Ecodis NV website is an informative website. For this reason, pursuant to SIC 32, the costs that have been capitalized according to BGAAP are to be expensed in accordance with IFRS.

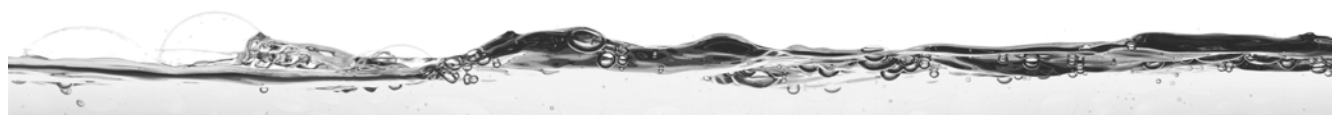
Deferred taxes

The Company has a history of tax losses. Pursuant to IAS 12 the Company has judged appropriate not to record any deferred tax asset arising from the tax losses carried forward, adjusted where necessary for the tax impact of the above corrections.



Annexe 1 : Explanatory glossary of terms used in connection with the Offering

Allocation Date	The date on which the Lead Manager, in consultation with the Company, will allocate the New Shares and any Overallotment Shares. This will be the first stock market trading day following the closing of the Offering Period, and is expected to be 21 June 2007.
Base Offering	EUR 15 million in New Shares.
Closing Date	The date on which the capital increase of up to EUR 15 million will be enacted in front of a public notary. This will be the fourth stock market trading day after the effective closing of the Offering Period, and is expected to be on 26 June 2007.
Company	The limited liability company (<i>naamloze vennootschap</i>) Ecodis, which is the issuer of the shares in the present Offering.
Date of this Prospectus	29 May 2007
Delivery Date	The date on which the shares and VVPR strips will be delivered to investors. This will be the fourth stock market trading day after the end of the Offering Period and is expected to be 26 June 2007.
Early Closing	The Lead Manager may, in consultation with the Company, starting from 4 p.m. on the sixth stock market trading day following the start of the Offering Period (viz. 13 June 2007 – 4 p.m.), close the Offering Period early.
Free Tranche	The portion of the Offering that is not being placed via the Reserved Tranche, and which is open to all investors via a public offering in Belgium, and to institutional investors in Europe via a private placement.
Lead Manager	Bank Degroof NV/SA, Nijverheidsstraat/Rue de L'Industrie 44, 1040 Brussels.
Listing Date	The date from when the Shares in Ecodis can be traded on Alternext Brussels. This will be the first stock market trading day following the Allocation Date, and is expected to be 22 June 2007.
Listing Sponsor	Bank Degroof NV/SA.
New Shares	The Shares in the Company to be issued pursuant to the decision of the Extraordinary General Meeting of Shareholders of 5 June 2007.
Offered Shares	The shares of Ecodis being offered in the Offering to retail investors in

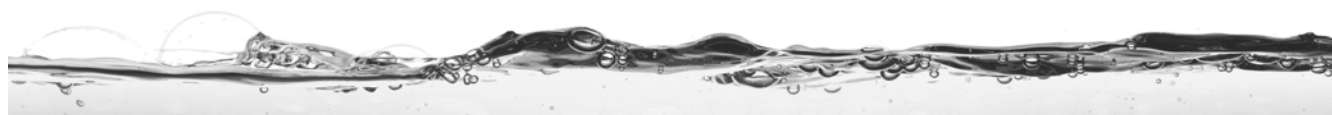


	Belgium and institutional investors in Europe.
Offering	EUR 15 million in New Shares. This amount may be increased by an Overallotment Option of up to EUR 2.25 million in existing shares as described in this Prospectus.
Offering Period	The period during which prospective investors can subscribe to the Offered Shares. This period will begin on 6 June 2007 and is expected to end on 20 July 2007, subject to Early Closing.
Overallotment Option	The right granted by the Selling Shareholders to the Lead Manager to purchase Shares in the Company from them at the Subscription Price during a thirty day period following the Listing Date.
Overallotment Shares	Up to EUR 2.25 million in existing Shares of the Company that have been granted by the Selling Shareholders to the Lead Manager and that can be used in the event of overallotment.
Payment Date	The day on which the price of the allocated shares has to be paid. This will be the third stock market trading day following the Allocation Date, and is expected to be 26 June 2007.
Prospectus	The present document, approved by the BFIC and prepared specifically for the Offering.
Shares in the Company	All shares issued or which may in the future be issued by Ecodis.
Reserved Tranche	The portion of the Offering reserved for Geert Pepping, Bart Stagier, PE Group NV, Leo Stevens & Cie BVBA and Marc Pirenne. The above-mentioned persons enjoy a priority allocation, whereby they may not receive less than the number of shares subscribed by them.
Selling Shareholders	A group of existing shareholders prior to the closing of the offering, who will sell a portion of their Shares in the event of the exercise of the Overallotment Option by the Lead Manager. This group consists of all shareholders at the time of the Offering, pro rata to their respective shareholdings.
Stabilization period	Period beginning on the Listing Date and ending no later than 30 calendar days after the Listing Date.
Subscription Price	The price per New Share that investors will pay. This amount will be published on 6 June 2007 in the Belgian financial press.
Underwriter	Bank Degroof NV/SA.

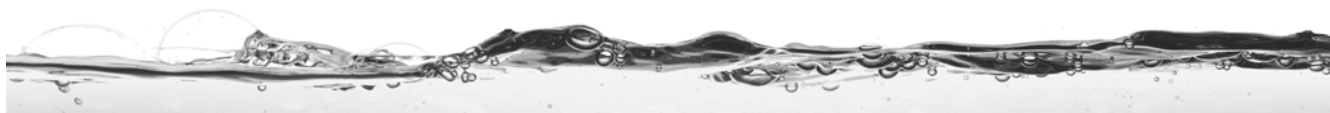


Annexe 2 : Explanatory glossary of terms used in connection with the activities of Ecodis

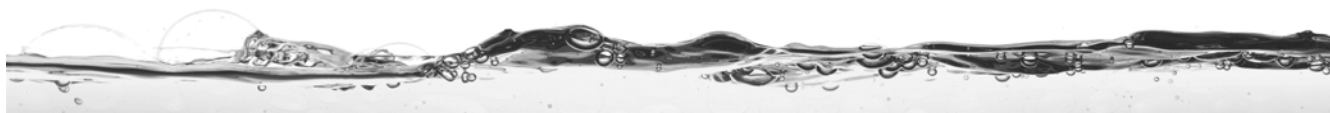
Acidified water	Water with a pH lower than 7.
Adsorption	Adsorption in water is a process in which a dissolved compound accumulates on the surface of a solid (e.g. active carbon), forming a molecular or atomic film.
Advanced Oxidation Process (AOP)	Oxidation processes based on the in situ generation of reactive radical species, generally the hydroxyl radical. Generation of radicals can for example be realized by a combination of different chemicals (like ozone + hydrogen peroxide) or combining a chemical (like hydrogen peroxide or ozone) with UV-radiation.
Aerobic	Aerobic is an adjective that means "requiring air" (where "air" usually means oxygen). The opposite of aerobic is anaerobic.
<i>Aeromonas</i>	<i>Aeromonas</i> is a gram-negative, facultative anaerobic rod-shaped bacterium of which the most species are associated with human diseases. The bacterium is ubiquitous in fresh and brackish water.
Aerosol	Aerosol technically refers to airborne small solid particles or liquid droplets.
Aggressive water	Water causing corrosion due to its chemical composition and physical properties.
Air scrubbing	The removal of compounds from air or another gas by sprinkling the gas stream in counterflow with water.
Algae	Algae (singular alga) encompass several groups of relatively simple living aquatic organisms that capture light energy through photosynthesis, using it to convert inorganic substances into organic matter. Algae vary from small, single-celled species to complex multicellular species. In very high densities (so-called algal blooms) algae may discolour and distaste the water and outcompete or poison other life forms.
Alloy	An alloy is a homogeneous mixture of two or more elements, at least one of which is a metal, and where the resulting material has metallic properties. The resulting metallic substance usually has different properties (sometimes significantly different) from those of its components.



Ammonia	Ammonia is a base with chemical formula NH_3 . It is a gas at ambient temperatures and pressures and is extremely good soluble in water. Applying chlorine-based disinfection methods, high concentrations of ammonia in the water lead to the formation of chloramines.
Ammonia nitrogen	Expresses the fraction of nitrogen containing compounds in the water present as ammonia/ammonium.
Ammonium	Ammonium is a cation with chemical formula NH_4^+ . It is the corresponding form of ammonia in acidic water.
Anaerobic	Anaerobic is an adjective that means “without air” (where "air" is almost always used to mean oxygen), as opposed to aerobic.
Analogue modem	A device for transmitting usually digital data over telephone wires by modulating the data into an audio signal to send it and demodulating an audio signal into data to receive it.
Anion	A negatively charged ion.
Anode	The electrode in an electrolysis cell at whose surface oxidation reactions take place.
Anodic oxidation	Anodic oxidation is a water treatment technology based on the in-situ generation of oxidants in water at the anodic electrode in an electrolysis cell. The formed oxidants provide disinfection of the water or degradation of pollutants.
Antibiotic	An antibiotic is a chemical compound that inhibits or abolishes the growth of microorganisms, such as bacteria, fungi, or protozoans.
AOC (Assimilable Organic Carbon)	Assimilable Organic Carbon (AOC) is that part of the organic carbon in water that can be metabolised by residential micro-organisms.
Aquatic biology	Aquatic biology is the discipline that uses the principles and methods of ecology to study natural aquatic environments
Aquatic environment	Water environment (the term aquatic refers to water)
<i>Aspergillus</i>	<i>Aspergillus</i> is a genus of around 200 molds found throughout much of nature worldwide. <i>Aspergillus</i> species are highly aerobic and are found in almost all oxygen-rich environments



Asthma	Asthma is a chronic disease of the respiratory system in which the airway occasionally constricts, becomes inflamed, and is lined with excessive amounts of mucus. During an asthma episode, inflamed airways react to environmental triggers such as smoke, dust, or pollen. An allergy related to a compound present during employment is called work-induced asthma.
ATP (adenosine triphosphate)	Adenosine triphosphate is most important as a "molecular currency" of intracellular energy transfer of all known living organisms. ATP concentrations in water can be used as indicator for monitoring biofilm sanitation.
Automatic backflush filter	Fully automatic self-cleaning debris filters for continuous separation of impurities from water and other liquid media. During the purge cycles, water pressure is applied in the opposite direction as the water flow during normal operation.
B2B-market (Business-to-business market)	Business conducted between companies, rather than between a company and individual consumers.
<i>Bacillus subtilis</i>	<i>Bacillus subtilis</i> is an aerobic bacterium that can cause food poisoning. It is able to survive in extreme conditions by producing endospores.
Bacteria	Bacteria (singular: bacterium) are unicellular micro-organisms. They are typically a few micrometres long and have many shapes including spheres, rods, and spirals. Bacteria reproduce by cell division or by the production of spores.
Bactericide	Bactericides or bacteriocides are substances that kill bacteria and include disinfectants, antiseptics or antibiotics.
Ballast water tank	A ballast tank is a compartment within a boat or ship that holds water. It can be filled or emptied in order to adjust the amount of ballast force required for proper stability of the vessel.
Base	A chemical substance that will lead to an increase of the pH when added to water.
BAT	Abbreviation for Best Available Technique.
Biocidal effect	The impact of biocides on micro-organisms in water.
Biocides	Biocides are chemical substances capable of killing different forms of living organisms in water.
Biofilm	A biofilm is a complex aggregation of micro-organisms marked by the excretion of a protective and adhesive matrix. Biofilms are also often characterized by surface attachment, structural heterogeneity, genetic diversity, complex community interactions, and an extracellular matrix of polymeric substances.



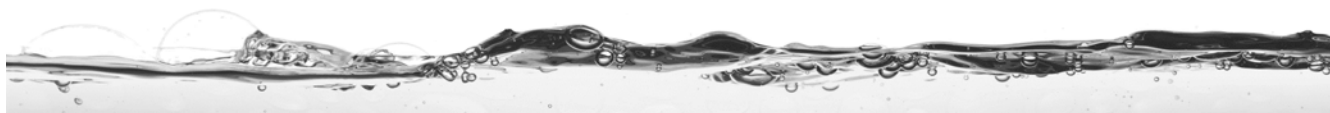
Biofilm monitor	Apparatus for studying biofilm formation in a sanitary system.
Biological contamination	A contamination with living micro-organisms including viruses, bacteria, fungi and mammal or bird antigens that cause health effects in humans.
Biomass	Quantity of living biological materials of microbial, plant or animal origin.
BOD (Biochemical/Biological Oxygen Demand)	Biochemical (biological) oxygen demand is a test used to measure the concentration of biodegradable organic matter present in a sample of water. It can be used to infer the general quality of the water and its degree of pollution by biodegradable organic matter.
Booster	A system that allows to heat-up water to high temperatures in very short times.
Bottled water	Water suited for human consumption sold in plastic or glass bottles.
Brackish water	Brackish water (less commonly brack water) is water that is saltier than fresh water, but not as salty as seawater. It may result from mixing of seawater with fresh water, e.g. in estuaries.
Break point chlorination	Breakpoint chlorination is the process of adding chlorine to water until all dissolved organic matter is oxidised.
Brine	A highly concentrated solution of sodium chloride (NaCl). Brine is used for the regeneration of water softeners and for the production of chlorine in salt electrolysis.
Bromate	Bromate is an anion with chemical formula BrO_3^- and a known carcinogen. It can be formed as a disinfection by-product by the oxidation of bromide ions in the water. This is a well-known problem in the ozonation of bromide-containing waters.
Bromide	Bromide is an anion with chemical formula Br^- and can naturally occur in water.
Bromine	Bromine is a chemical element with symbol Br and a halogen. The pure chemical element has the physical form of a diatomic molecule, Br_2 . Bromine is highly reactive and is a powerful oxidizing and disinfecting agent in the presence of water.
Bromine chloride	Chemical compound with formula BrCl . It is a red-brown gas with oxidizing and disinfecting properties.
Bronchial hyperreactivity	The airways of asthmatics are "hypersensitive" to certain triggers, also known as stimuli. In response to exposure to these triggers, the bronchi (large airways) contract into spasm (an "asthma attack"). Inflamed airways react to environmental triggers such as smoke, dust, or pollen. The airways narrow and produce excess mucus, making it difficult to breathe.



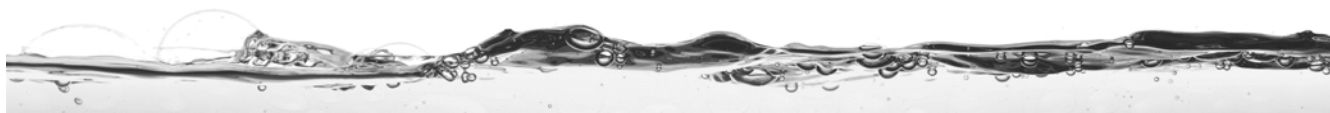
Buffer tank	A storage tank that can take care of fluctuations in water flow.
Calibration	The process of determining the performance parameters of an artifact, instrument, or system by comparing it with measurement standards. Adjustment may be a part of a calibration, but not necessarily. A calibration assures that a device or system will produce results which meet or exceed some defined criteria with a specified degree of confidence.
Carcinogen	Any substance, radionuclide or radiation which is an agent directly involved in the promotion of cancer.
Catalyst	In chemistry and biology, catalysis is the acceleration (increase in rate) of a chemical reaction by means of a substance, called a catalyst, that is itself not consumed by the overall reaction.
Cathode	The electrode in an electrolysis cell at whose surface reduction reactions take place.
Cation	A positively charged ion.
Caustic	Indicates very alkaline solutions.
CCO	Chief Commercial Officer
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CFU/ml	Abbreviation for colony forming units per milliliter water. It is an expression of the concentration of colony forming micro-organisms present in the water.
Chemical disinfection	Methods based on adding disinfecting chemicals to the water to be treated.
Chloramines	Collective noun for the chemical substances monochloramine, dichloramine and trichloramine. They are formed by replacement of one or more hydrogen atoms from ammonia by chlorine atoms. They are rather weak disinfectants and are therefore only used for providing secondary disinfection.
Chlorate	A chemical substance with formula ClO_3^- . Chlorate salts are used as reagents in the generation of chlorine dioxide.
Chloride	An anionic species with chemical formula Cl^- . It is for instance liberated in water when dissolving table salt.
Chlorinated water	In water treatment a term referring to solutions of chlorine gas.
Chlorination	A water treatment process in which either chlorine gas or hypochlorite solutions are added to the water for disinfection purposes or for the oxidation of pollutants.



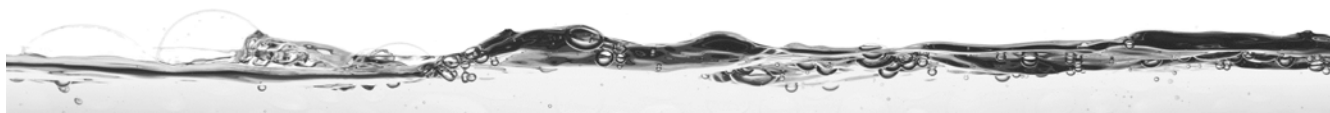
Chlorine	Chlorine is the chemical element with atomic number 17 and symbol Cl. It is a halogen, and has the physical form of a diatomic molecule, Cl ₂ . Chlorine has strong oxidizing properties and is frequently used as a disinfectant in water treatment. It is however poisonous and was used as a chemical weapon during WW I.
Chlorine allergy	Altered reactivity in humans to the allergen (substances foreign to the body that cause allergy) chlorine by exposure through injection, inhalation, ingestion, or skin contact.
Chlorine bleach	Collective noun for commercially available solutions of sodium hypochlorite (NaOCl) that are dosed to water to provide disinfection.
Chlorine dioxide	A good water soluble and strong oxidizing gas with chemical formula ClO ₂ . It exhibits good disinfecting properties.
Chlorine generator	An apparatus for on-site chlorine gas production based on the electrolysis of brine.
Chlorine resistance	The resistance certain micro-organisms can develop against the disinfecting action of chlorine.
Chlorite	A chemical substance with formula ClO ₂ ⁻ and strong oxidizing properties. Chlorite salts are used as reagents in the generation of chlorine dioxide.
Chloroform	Common name for the chemical substance trichloromethane (CHCl ₃) a so-called trihalomethane (THM). It can be formed as a disinfection by-product in the chlorination of water.
CIP (Cleaning-in-place)	Cleaning-in-place is a way of cleaning the interior surfaces of pipes, vessels, process equipment, and associated fittings, without disassembly.
COD (Chemical Oxygen Demand)	In environmental chemistry, the chemical oxygen demand (COD) test is commonly used to indirectly measure the amount of organic compounds in water. Most applications of COD determine the amount of organic pollutants found in surface water (e.g. lakes and rivers), making COD a useful measure of water quality. It is expressed in milligrams per liter (mg/L), which indicates the mass of oxygen consumed per liter of solution.
Coliform bacteria	Rod-shaped bacteria usually found in the intestinal tracts of animals, including humans. Coliform bacteria do not require but can use oxygen, and they do not form spores. Coliform bacteria are a commonly-used bacterial indicator of sanitary quality of foods and water.
COM	COM is the original, yet still common, name of the serial port interface on IBM PC-compatible computers.



Combined oxidants	Oxidants that have combined with other compounds and are as such not freely available anymore in the water.
Compressor	A gas compressor is a mechanical device that increases the pressure of a gas (often air) by reducing its volume.
Concentration	The amount of a certain solute per unit of water volume most commonly expressed as mg/L.
Conductance	Electrical conductance is the reciprocal of electrical resistance. It is a measure of how easily electricity flows along a certain path through an electrical element.
Conductivity	Electrical conductivity or specific conductivity is a measure of a material's ability (like water) to conduct an electric current.
Consulting/Engineering	Consulting is the business of providing advice to clients for a fee in order to help them solve a particular problem or range of problems within a certain area of business. Engineering: The application of scientific and mathematical principles to practical ends such as the design, manufacture, and operation of efficient and economical structures, machines, processes, and systems.
Contaminant	Generally used to indicate pollution with (pathogenic) micro-organisms.
Contamination	In general used to address pollution caused by micro-organisms.
Contract operations	Every operation that is carried out in the frame of complying with a contract.
Cooling water	Water used in a cooling system for removing heat from a process or another medium.
Copper-silver ionization	A disinfection method based on the introduction of copper and silver ions in water by electrolysis.
Corrosion	Corrosion is deterioration of essential properties in a material due to reactions with its surroundings. Mostly it refers to the deterioration of metals by electrochemical reactions with water or oxygen.
Corrosion inhibitor	Organic or inorganic substances added to the water to prevent corrosion. They are frequently used in cooling water systems.
<i>Cryptosporidium</i>	A genus of protozoans with at least 4 species. These are intestinal parasites in humans and other vertebrates and causes diarrhea and the disease cryptosporidiosis.
CTO	Chief Technical Officer
Cutting oil	Special type of oil used for cutting or processing of metals plates or metal parts.
Cyanide	An anionic species with chemical formula CN ⁻ . It is frequently found in waste water from ore processing plants. Its acidic form, hydrogen



	cyanide (HCN), is extremely toxic.
Data communication	The transfer of information from one computer to another over a communications link. The transfer can be occasional, continuous, or a combination of both
Data logging	Data logging is the practice of recording sequential data, often chronologically. In computerized data logging, a computer program may automatically record events in a certain scope in order to provide an audit trail that can be used to diagnose problems.
DBP (Disinfection By-Products)	Collective noun for harmful products formed in side-reactions during disinfection processes.
Deironing	The process in which iron and manganese are removed from water by an oxidation process followed by filtration. Generally, oxidation of these elements is realized by an efficient contact between water and oxygen in the air. Filtering is generally carried out with a sand filter.
Desalination	The process in which dissolved salt is removed from brackish water or sea water in order to produce drinking water.
Diffusion	The transport of matter from one point to another by random molecular motions under influence of a concentration gradient. It occurs in gases, liquids, and solids.
DIP (Disinfection-in-place)	Disinfection-in-place is a way of disinfecting the interior surfaces of pipes, vessels, process equipment, and associated fittings, without disassembly.
Discharge	Deliberately release water from a location. In open cooling water systems, the cooling water has to be discharged at regular times due to the phenomenon of thickening.
Discharge valve	A valve that periodically opens to drain water. The opening frequency can be set constant or controlled by a micro-controller.
Disinfection	Disinfection is the treatment of water, surfaces or materials to destroy harmful micro-organisms.
Dispenser	A system designed for dispensing for example beverages. It comprises a container so designed that the contents can be used in prescribed amounts.
Dose	A well-defined amount of a gas, solid or liquid that is added to a certain volume of water in a certain time period.
Drinking water	Drinking water or potable water is water of a quality suited for human consumption or cooking.
Duplex communication	In telecommunication, duplex communication means that both ends of the communication can send and receive signals at the same time.



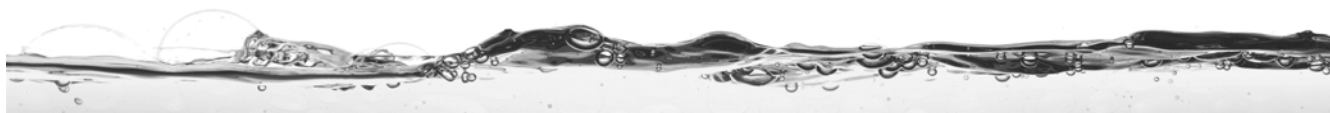
Ecology	Ecology is the scientific study of the distribution and abundance of living organisms and how the distribution and abundance are affected by interactions between the organisms and their environment.
Effluent	Effluent is an outflowing of water from a natural body of water, or from a man-made structure. It is often used to describe the outflow from a sewer or sewage system or the discharge of liquid waste, as from a factory or nuclear plant.
Electric charge	A basic property of elementary particles of matter that determines their electromagnetic interaction.
Electrochemical reactions	Are chemical reactions either caused or accompanied by the passage of an electric current and involving in most cases the transfer of electrons between two substances. Electrochemistry is the science dealing with the chemical changes accompanying the passage of an electric current, or the reverse process in which a chemical reaction is used as the source of energy to produce an electric current, as in a battery.
Electrode	An electrode is an electrical conductor used to make contact with a metallic part of a circuit. In an electrolysis cell electrons leave the cell and oxidation occurs at one electrode (anode), and electrons enter the cell and reduction occurs at another electrode (cathode).
Electrolysis	A means of producing chemical changes through reactions at electrodes in contact with an electrolyte by the passage of an electric current. Electrolysis cells, also known as electrochemical cells, generally consist of two electrodes connected to an external source of electricity (a power supply or battery) and immersed in a liquid that can conduct electricity through the movement of ions.
Electrolyte	A substance that completely or partially dissociates into ions when dissolved in water.
Electron	The electron is a fundamental subatomic particle that carries a negative electric charge. Together with atomic nuclei, electrons make up atoms.
Electrostatic discharge	Electrostatic discharge (ESD) is the sudden and momentary electric current that flows between two objects at different electrical potentials. The most spectacular form of ESD is the spark as in a lightning strike.



Embedded software	Instructions that permanently reside in a ROM or flash memory chip. Embedded software may be immediately available to the CPU or, for faster execution, may be transferred to RAM first and then executed. Contrast with regular software applications, which are stored on disk and must be loaded into RAM for execution.
Emergency potable water	Water supplied to people by an alternative system when potable water supply fails in case of an emergency. Usually the water is distributed in sealed plastic bags or in plastic bottles.
End-of-pipe technique	Techniques focussed on the purification of waste water streams rather than dealing with the source of pollution.
<i>Enterococci</i>	A genus of bacteria with a typical round form. They are indicative for faecal contamination of a water.
<i>Escherichia coli (E. coli)</i>	One of the main species of bacteria living in the lower intestines of mammals, known as gut flora. When located in the large intestine, it actually assists with waste processing, vitamin K production, and food absorption. It is a commonly-used bacterial indicator of sanitary quality of foods and water.
Ethernet	A type of networking technology for local area networks.
Eutrophication	Eutrophication is caused by the increase of chemical nutrients, typically compounds containing nitrogen or phosphorus, in an ecosystem like water. This generally promotes excessive plant growth and decay, favors certain weedy species over others, and is likely to cause severe reductions in water quality.
Eventslogging	A type of datalogging in which text messages are recorded rather than data. These “events” can be notifications of proper functioning of the installation, alarm messages, exceeding of limits, ...
Facultative bacteria	Bacteria who are capable of surviving in aerobic (respiration) and anaerobic (fermentation) conditions.
Faecal bacteria	Bacteria found in the faeces of vertebrates.
Filtration	Filtration is the process of mechanically separating a mixture of solids and fluids using a filter. The pore size of the filter determines which compounds are withheld and which can pass through the filter.
Flotation sensor	System consisting of a magnetic floater and a sensor to measure liquid flow or liquid heigh.
Flow	The rate at which a certain volume water is evacuated per unit of time. It is generally expressed in units of volume per time.
Free active oxidants	A measure for the concentration (expressed in mg/liter or ppm) of free oxidants in water taking into account the effect of pH.



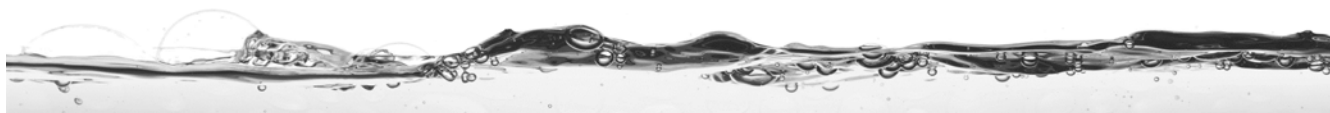
Free chlorine	Collective noun for all compounds that have a disinfecting action during chlorination of water. Hypochlorous acid (HOCl), the hypochlorite ion (OCl ⁻) and dissolved chlorine gas (Cl ₂) constitute the free chlorine.
Free oxidants	A measure for the concentration of free oxidants in water as determined with the DPD colorimetric analysis method. The concentration is expressed in mg/liter or ppm and does not take the effect of pH into account.
<i>Fusarium oxysporum</i>	A pathogenic fungus causing a variety of plant diseases, including cabbage yellows and wilt of tomato, flax, cotton, peas, ...
Galvanic	Of or relating to direct-current electricity, especially when produced chemically.
Galvanized steel	Steel coated with a thin zinc film for corrosion protection.
Gas-liquid contactors	Systems designed for mixing gas and water in an efficient way to improve the mass transfer of compounds between the two phases. Gas-liquid contactors are for example used in the ozonation of water.
Germ	Is used to indicate either a small mass of protoplasm or cells from which a new organism or one of its parts may develop, or either a micro-organism, especially a pathogen.
Germfree	Free of micro-organisms.
Grey water	Grey water is non-industrial wastewater generated from domestic processes such as washing dishes, laundry and bathing.
Ground water	Groundwater is water located beneath the ground surface in soil pore spaces and in the fractures of geologic formations.
GSM-GPRS-UMTS modem	GSM (Global System for Mobile Communications) is a digital cellular phone technology that is the predominant system in Europe, but also used worldwide. General Packet Radio Service (GPRS) is a Mobile Data Service available to users of GSM and some types of mobile phones. GPRS data transfer is typically charged per megabyte of transferred data, while data communication via traditional circuit switching is billed per minute of connection time. UMTS or Universal Mobile Telecommunications System) is one of the third-generation (3G) mobile phone technologies. It is seen as the successor of the GSM/GPRS technology.
GUI	Graphical User Interface
Habitat	The area or environment where an organism or ecological community normally lives or occurs.
Halogenated organic compounds	Organic compounds containing one or more fluorine, chlorine,



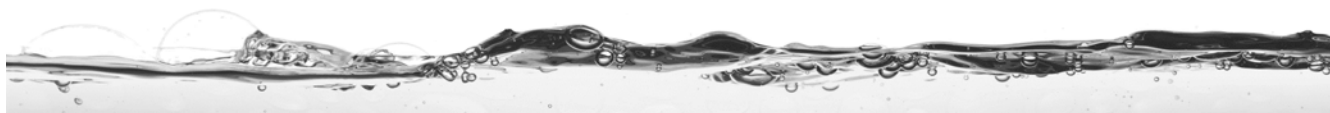
	bromine or iodine atoms.
Hard water	Water that contains high concentrations of mineral salts of calcium and magnesium, principally as bicarbonates, chlorides, and sulfates, and sometimes iron.
Heat exchanger	A device, such as an automobile radiator, used to transfer heat from a fluid on one side of a barrier to a fluid on the other side without bringing the fluids into direct contact.
Heavy metals	Heavy metals are higher atomic weight elements, which have the properties of a metallic substance at room temperature and a density of at least 5,0 g/cm ³ . Heavy metals such as mercury, lead and cadmium can accumulate over time in the bodies of mammals resulting in serious illness.
Horticultural irrigation water	Water used in hydroculture, which is a method of growing plants using mineral nutrient solutions instead of soil. Terrestrial plants may be grown with their roots in the mineral nutrient solution only or in an inert medium. Frequently, this water is recycled after use for irrigation purposes.
Hydrochloric acid	Hydrochloric acid, also called hydrogen chloride, has the formula HCl. It is a strong acid often used to correct the pH of water, for decalcification of surfaces or water pipes, or for the production of chlorine dioxide.
Hydrodynamic shear forces	Shear forces originating from the movement of a liquid.
Hydrogen gas	A flammable, odorless and colorless gas with chemical formula H ₂ and the lightest of all gases. Hydrogen gas is formed at the cathode in the electrolysis of water.
Hydrogen sulfide	Chemical compound with formula H ₂ S. It is a colorless, poisonous gas with a characteristic rotten-egg odor. It is highly soluble in water where it behaves as a weak acid and can contribute substantially to corrosion.
Hydrophilic	Having an affinity for water.
Hydrophobic	Refers to the physical property of a molecule that is repelled from a mass of water.
Hyperventilation	Abnormally fast or deep respiration, which results in the loss of carbon dioxide from the blood, thereby causing a fall in blood pressure, tingling of the extremities, and sometimes fainting.
Hypochlorite	An anionic compound with chemical formula OCl ⁻ . It is the dissociated form of hypochlorous acid.
Hypochlorous acid	A weak but strongly oxidizing acid with chemical formula HOCl. It has strong disinfecting properties. Its dissociated form, the



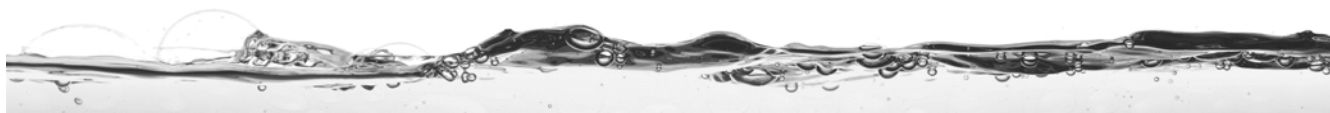
	hypochlorite ion OCl^- is a significantly weaker disinfectant. HOCl is produced by the reaction of chlorine gas with water.
In statu nascendi	Used in chemistry to express the state of a chemical element or compound immediately after its formation.
Incubation period	Incubation period is the time elapsed between exposure to a pathogenic organism and when symptoms and signs are first apparent. The period can vary between minutes and many years.
Industrial waste water	Waste water originating from industrial processes.
Inhibitor	A chemical substance added to the water to inhibit a certain chemical reaction.
Inoculate	To deliberately graft micro-organisms or infectious material into a culture medium for growth or reproduction.
In-situ	In chemistry, in situ typically means "in the reaction mixture".
Interface card	A card containing circuits that allow a device to interface with other devices.
Iodine	Iodine is the chemical element with atomic number 53 and symbol I. It is a halogen, and has the physical form of a diatomic molecule, I_2 . Iodine has oxidizing and disinfecting properties.
Ion	An atom or molecule that has obtained a positive or a negative charge due to respectively the loss or the capture of one or a number of electrons.
Ion exchanger	A solid or liquid material containing ions that are exchangeable with other ions with a like charge that are present in a solution in which the material is insoluble.
Irrigation	Irrigation is the artificial application of water to the soil for instance in agriculture.
ISO 14001 certificate	ISO 14001 (ISO = International Organization for Standardization) is one of the standards of the ISO 14000 series and is used worldwide to set-up and certificate environmental management systems.
Isolator	A material that does not or only poorly conducts electrical current or heat.
KIWA	KIWA (Keuringsinstituut voor Waterleidingartikelen) is an independent and well-known research and certification organisation from the Netherlands.
Laminar flow	Fluid flow in which the fluid travels smoothly or in regular paths.
Lead	Chemical element with symbol Pb and a heavy metal. In the past used as a construction material for water pipes.
Legionella	A genus of bacteria with at least 50 species of which a number is able to cause the human Legionnaires' disease and the lesser form,



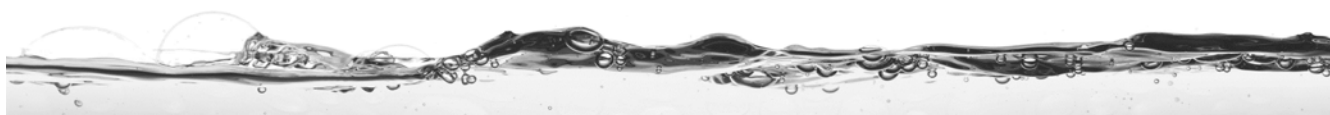
	Pontiac fever.
<i>Legionella Pneumophila</i>	That species of legionella bacteria that is the most important cause of legionellosis.
Legionellosis	Legionellosis or legionnaires' disease is an acute, sometimes fatal respiratory disease caused by the bacteria <i>Legionella pneumophila</i> .
Listeria	Any of various rod-shaped, gram-positive bacteria of the genus <i>Listeria</i> , which includes the causative agent of listeriosis.
LOX (Liquid Oxygen)	Molecular oxygen is a gas under normal temperatures and pressures but can be liquidified under high pressures and/or low temperatures for storage purposes. In large ozone installations, oxygen is stored as LOX.
MAC	Maximum allowable concentration
Membrane	A thin sheet of natural or synthetic material that is permeable to substances in solution and are used to separate species in a fluid on the basis of size, charge or other characteristics. Membranes are employed in a range of applications from water and wastewater treatment.
Membrane electrolysis cell	An electrolysis cell containing a membrane to separate the compounds formed at the anode and cathode.
Metabolism	The chemical processes occurring within a living cell or organism that are necessary for the maintenance of life. In metabolism some substances are broken down to yield energy for vital processes while other substances, necessary for life, are synthesized.
mg/liter	Unit of concentration expressed as the mass of a compound in milligram per liter water. One mg/liter equals 1 ppm.
Microbial growth	The growth or reproduction of micro-organisms like bacteria, moulds, yeasts, algae, ...
Microcontroller	A microcontroller (or MCU) is a computer-on-a-chip. It is a type of microprocessor emphasizing self-sufficiency and cost-effectiveness, in contrast to a general-purpose microprocessor.
Microfiltration	A filtration process using membranes with a typical pore size range of 0.1 to 10 µm. With micro-filtration bacteria and yeast cells can be separated from the water.
Micron	A micron or micrometer is a unit of length equal to the one million part of a meter.
Micro-organism	Organisms that are microscopic (too small to be seen by the human eye). Micro-organisms can be bacteria, fungi, yeasts,...
Microprocessor	A microprocessor is a programmable digital electronic component that incorporates the functions of a central processing unit (CPU) on



	a single semiconducting integrated circuit (IC). A CPU is the component that interprets computer program instructions and processes data.
Molecule	A combination of two or more atoms of the same or different elements held together by chemical bonds.
Mortality	Mortality rate is a measure of the number of deaths (in general, or due to a specific cause) in some population, of an ongoing treatment, or a significant length of time after an acute treatment.
Mould	Moulds (or molds) include all species of microscopic fungi that grow in the form of multicellular filaments. In contrast, microscopic fungi that grow as single cells are called yeasts. Although some molds cause disease or food spoilage, others are useful for their role in degradation of organic material.
Nanofiltration	A pressure-driven filtration process using membranes with very small pores able to separate bacteria and viruses from water.
Nanometer	A nanometer is a unit of length equal to the one billion part of a meter.
Neutralisation	Neutralization is a chemical reaction, also called a water forming reaction, in which an acid and a base or alkali (soluble base) react and produce a salt and water.
Nitrate	Anionic compound with chemical formula NO_3^- . In water it is known as a nutrient.
Nitric acid	Chemical compound with formula HNO_3 . It is a strong acid with oxidizing properties and is very corrosive.
Nitrogen	Nitrogen is the chemical element with atomic number 7 and symbol N. In water treatment “nitrogen” is used as a collective noun indicating all nitrogen containing substances.
Non-oxidizing biocides	Non-oxidizing substances that have a biocidal effect. They kill micro-organisms by selectively stopping one of the metabolic processes of the organisms like respiration, nutrient uptake, ... Non-oxidizing biocides are generally organic substances with a wide range of structures.
Non-potable water	Water not suited for human consumption or cooking.
Nutrient	A nutrient is either a chemical element or compound used in an organism's metabolism or physiology. In water treatment it is generally used to indicate nitrogen and phosphorus compounds in the water but also other essential trace elements.
Online monitoring	A communication system able to follow and control a process in real-time from another location.



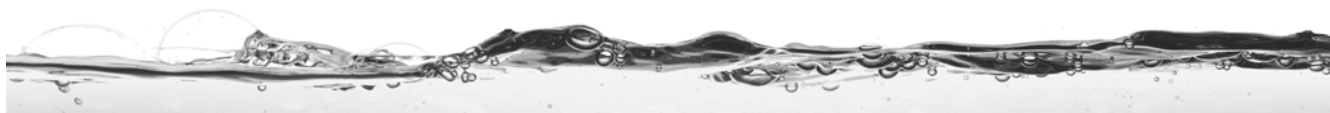
Organic compounds	An organic compound is any member of a large class of chemical compounds whose molecules contain carbon.
OSSF (On-site sewage facility)	On Site Sewage Facilities (OSSF) are wastewater systems designed to treat and dispose effluent on the same property that produces the wastewater.
Oxidant	An oxidant or oxidizing agent is a compound with oxidizing properties. It easily gains electrons and evolves to a reduced state.
Oxidation	A reaction in which an atom or molecule loses one or more electrons and its valence is correspondingly increased. Simultaneously the electrons are accepted by another atom or molecule.
Oxidizing biocides	Destroy micro-organisms by non-selective oxidation processes of cell structures. This leads to the inactivation of the organism.
Ozonation	Ozonation or ozonisation is the process of treating water with ozone.
Ozone	Powerfully oxidizing allotropic form of the element oxygen, containing three oxygen atoms (O ₃). It is an unstable, poisonous gas that is formed naturally in the ozone layer from atmospheric oxygen. On industrial scale it is produced by electric discharge or exposure to ultraviolet radiation of an oxygen containing gas. Ozone has strong oxidizing and disinfecting properties.
Ozone generator	An ozone generator or ozonizer is an apparatus for the production of ozone. The principle is based on an electric discharge in an oxygen containing gas or by UV irradiation. Generally pure oxygen or dried air is used as a feed gas.
Parameter	One of a set of measurable factors, such as temperature and pressure, that define a system and determine its behavior and are varied in an experiment.
Pasteurization	Pasteurization is the process of heating liquids for the purpose of destroying harmful micro-organisms.
Pathogen	A pathogen or infectious agent is a biological agent that causes disease or illness to its host.
Peak flow	The water flow exceeding the average day consumption. Peak flow can be related to the part of the day, the day of the week (week – weekend), degree of occupation in for instance a hotel,...
Peer-reviewed article	Peer review (known as refereeing in some academic fields) is a process of subjecting an author's scholarly work or ideas to the scrutiny of others who are experts in the field. It is used primarily by editors to select and to screen submitted manuscripts, and by funding agencies, to decide the awarding of grants. The peer review process aims to make authors meet the standards of their discipline, and of



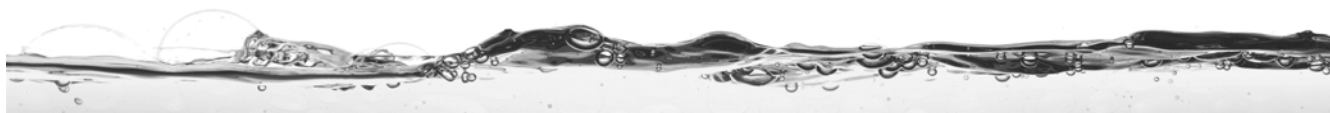
	science in general.
Peracetic acid	Chemical compound with formula CH_3COOOH . It is an organic acid with oxidizing and disinfecting properties. It can be produced by mixing acetic acid and hydrogen peroxide solutions.
Permeate	The water passed through the pores of a membrane. It does not contain the substances anymore that are withheld by the membrane.
pH	The pH is a measure of the acidity or alkalinity of a solution. Solutions with a pH less than seven are considered acidic, while those with a pH greater than seven are considered basic (alkaline). pH 7 is considered neutral because it is the accepted pH of pure water at 25 °C.
Phosphorus	Phosphorus is the chemical element with atomic number 15 and symbol P. In water treatment “phosphorus” is used as a collective noun for indicating all phosphorus containing substances.
Physical disinfection	Disinfection methods that do not rely on the dosage of chemicals to the water. Micro-organisms are killed by means of physical mechanisms or chemically induced processes.
Phytopathology	Phytopathology (plant pathology) is the scientific study of plant diseases caused by pathogens (infectious diseases) and environmental conditions (non-infectious factors) and their control.
Pilot testing	The testing of a cleanup technology under actual site conditions in a laboratory in order to identify potential problems before implementation.
Point-of-entry treatment (POE)	Total water treatment at the inlet to an entire building or facility.
Point-of-use treatment (POU)	Water treatment at a limited number of outlets in a building or facility, for less than the whole building.
Pollutant	Is defined as a chemical or physical agent in an inappropriate location or concentration. The sources of pollution are varied.
Polymeric sugars	Polymers build-up of sugar molecules. They form the external matrix of a biofilm.
2-Position valve	A device controlling flow with only an open and closed position either controlled manually or automatically.
Potable water supply	The whole of processes for collection, treatment, storage and distribution of water from the source to the consumer.
ppb (Parts per billion)	A measure of concentration used to denote low concentrations of compounds in water. One ppb is one part of a compound on a total of one billion parts. In water analysis 1 ppb of a compound equals 1 microgram per liter.



ppm (Parts per million)	A measure of concentration used to denote low concentrations of compounds in water. One ppm is one part of a compound on a total of one million parts. In water analysis 1 ppm of a compound equals 1 milligram per liter.
Precipitation	Precipitation is the formation of a solid in a solution during a chemical reaction. When the chemical reaction occurs the solid formed is called the precipitate.
Pre-oxidation	Pre-treatment of water with an oxidation technique with the purpose of facilitating following water treatment steps.
Private equity/venture capital	Equity capital that is made available to companies or investors, but not quoted on a stock market. The funds raised through private equity can be used to develop new products and technologies, to expand working capital, to make acquisitions, or to strengthen a company's balance sheet. Venture capital is Money made available for investment in innovative enterprises or research, especially in high technology, in which both the risk of loss and the potential for profit may be considerable. Also called risk capital.
Process water	Water used in every type of production process.
Process water leak	Pollution/contamination of the environment by leaching of process water.
Protozoan	Extensive group of single-celled micro-organisms subdivided on the basis of their movement mechanisms. Opposite to bacteria and viruses they have a cell core with hereditary material.
<i>Pseudomonas aeruginosa</i>	An opportunistic pathogen that is the most significant cause of hospital-acquired infections, particularly in predisposed patients with metabolic, hematologic, and malignant diseases.
<i>Pseudo-oestrogens</i>	Chemicals that influence or imitate the action of hormones, mostly sex hormones. Pseudo-oestrogens are likely causative to breast cancer, testicle cancer and decreased male fertility.
Pulse dosing	Discontinuous dosing of chemicals instead of continuously.
Purified water	Term to refer to water that has passed a water purification plant and is ready for delivery.
<i>Pythium ultimum</i>	A plant pathogen for which especially young and weak plant tissues are sensitive.
Radicals	Collective noun for atoms or molecules (charged and not charged) who have at least one unpaired electron and therefore are unstable and highly reactive.



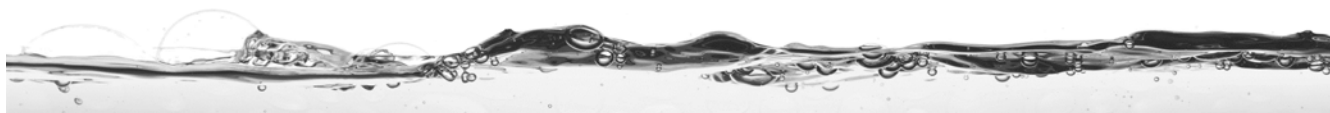
RADS (Reactive airways disfunction syndrome)	The phrase "reactive airways dysfunction syndrome" (RADS) denotes the development of a persistent asthma-like condition with airway hyper-responsiveness developing in a previously healthy asymptomatic individual within 24 hours of a single exposure to concentrated respiratory irritants.
<i>Ralstonia Solanacearum</i>	<i>Ralstonia solanacearum</i> is a plant pathogenic soil bacterium, previously classified as <i>Pseudomonas solanacearum</i> . It colonises the phloem, causing a bacterial wilt in a very wide range of potential host plants.
Raw water	To term the water before the start of a water treatment.
Recalcitrant	In water treatment used to term hardly degradable pollutants. As such they can be present for a long time in water or the environment.
Recirculation	Movement or passage through a system of vessels, as of water through pipes.
Regulating valve	A valve that regulates or closes off the flow of a fluid. It can be adjusted manually or automatically.
Residual disinfection	The ability of a disinfection method to keep disinfected water germfree for a certain period.
Reverse engineering	The analysis of a completed system in order to isolate and identify its individual components or building blocks.
Reverse Osmosis	Reverse osmosis is a filtration process that uses pressure to force a solvent through a membrane that retains the solute on one side and allows the pure solvent to pass to the other side.
<i>Rhizoctonia solani</i>	Is a plant pathogen with a wide host range and worldwide distribution.
Safe water	Water that does not contain pathogenic micro-organisms, hazardous materials or chemicals and can be considered to safe for drinking.
Salmonella	Any of the various rod-shaped bacteria of the genus <i>Salmonella</i> , many of which are pathogenic, causing food poisoning, typhoid, and paratyphoid fever in humans and other infectious diseases in domestic animals.
Salt	A salt, in chemistry, is defined as the product formed from the neutralisation reaction of acids and bases. Salts are ionic compounds composed of positively and negatively charged ions so that the product is electrically neutral (without a net charge). When salts are dissolved in water, they are called electrolytes.
Salt electrolysis	Salt electrolysis systems produce chlorine from salt dissolved in water. Therefore a salt concentration of 4-6 g NaCl/l is needed.
Scale inhibitors (anti-scalants)	Organic or inorganic substances added to water to prevent the



	formation of scale.
Sedimentation	Is the settling of fragments of inorganic or organic material to the bottom of a liquid. The term sediment is generally used for particles of anorganic nature.
Sensorial qualities	Of or relating to sensation or to sensory impressions: sensational, sensitive, sensory, sensual, sensuous. Sensorial qualities are particularly important for food products.
Serum	The clear yellowish fluid obtained upon separating whole blood into its solid and liquid components after it has been allowed to clot. Composition of blood serum: 91% water, 7% proteins, 2% electrolytes, nutrients and hormones.
Sludge	Sludge is the residual semi-solid material left from industrial, water treatment, or wastewater treatment processes.
Sodium hypochlorite	A chemical substance with chemical formula NaOCl and oxidizing and disinfecting properties. It dissociates in water into sodium and hypochlorite ions (OCl ⁻). The corresponding acidic form of the hypochlorite is hypochlorous acid (HOCl).
Soft water	Relative to hard water, soft water contains low concentrations of mineral salts of calcium and magnesium, principally as bicarbonates, chlorides, and sulfates, and sometimes iron.
Softening	The process of reducing the calcium or magnesium ion concentrations in hard water. These "hardness ions" cause different problems like inhibiting the cleaning effect of some detergent formulations and the formation of scale in pipes and heat exchanger surfaces.
Spoilage micro organisms	Micro-organisms that are responsible for food decay and poisoning.
Spores	A small, usually single-celled reproductive body that is highly resistant to desiccation and heat and is capable of growing into a new organism. It is produced especially by certain bacteria, fungi, algae, and non-flowering plants. Certain bacteria form spores in response to adverse environmental conditions.
<i>Staphylococcus Aureus</i>	<i>Staphylococcus aureus</i> is a spherical bacterium, frequently living on the skin or in the nose of a person, that can cause a range of illnesses from minor skin infections and abscesses, to life-threatening diseases such as pneumonia and meningitis.
Static sensors	A measuring device with no moving parts and positioned on a fixed location in a system.



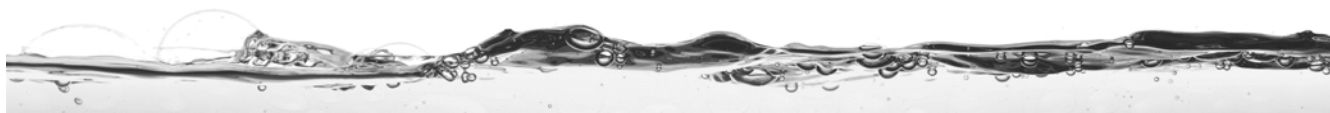
Sterile	Refers to a condition where all transmissible agents (such as fungi, bacteria, viruses) are absent. Sterile can refer to surfaces, equipment, foods, medications, or biological culture medium. Sterilization can be achieved through application of heat, chemicals, irradiation, or filtration.
Sulphate reducing bacteria	Any of several bacteria, like those of the genus <i>Desulfovibrio</i> , who supply in their energy by reducing sulphate.
Suppletion water	Water that is supplied at regular times in a closed system to compensate for water loss due to evaporation or discharge. Cooling water systems and swimming pools periodically need suppletion water.
Surface water	Water collecting on the ground or in a stream, river, lake, sea, ocean,... is called surface water. It stands in direct contact with the earth's atmosphere.
SVW	SVW (Samenwerking Vlaams Water) is a Flemisch non-profit organisation coordinating water companies in Flanders.
Swimming water	Water that fulfills all quality requirements to allow swimming and water recreation.
TDS (Total Dissolved Solids)	Total dissolved solids is an expression for the combined content of all inorganic and organic substances contained in a liquid which are present in a molecular, ionized or micro-granular suspended form. Generally, the operational definition is that the solids must be small enough to survive filtration through a sieve size of two micrometres.
Telemetry	The science and technology of automatic measurement and transmission of data by wire, radio, or other means from remote sources to receiving stations for recording and analysis.
Thermal disinfection	A disinfection technique based on killing micro-organisms by heating up the water to a high temperature for a sufficiently long period. Thermal disinfection is traditionally used to suppress <i>Legionella pneumophila</i> in sanitary systems.
Thickening	The raise in concentration of dissolved salts in cooling water due to evaporational losses of water in open systems.
THM (Trihalomethanes)	Chemical compounds in which three of the four hydrogen atoms of methane (CH ₄) are replaced by halogen atoms (fluorine, chlorine, bromine, iodine). They are considered carcinogenic.
Titanium	Titanium is the chemical element with atomic number 22 and symbol Ti. The two most useful properties of the metal form are corrosion resistance, and the highest strength-to-weight ratio of any metal.
Total oxidants	The sum of the free and combined oxidants present in the water



	expressed in mg/liter of ppm.
Transformer	A device used to transfer electric energy from one circuit to another, especially a pair of multiply wound, inductively coupled wire coils that effect such a transfer with a change in voltage, current, phase, or other electric characteristic.
Trichloroamine	Chloramine compound with chemical formula NCl_3 . It has weak disinfecting properties.
<i>Trichoderma hamatum</i>	<i>Trichoderma hamatum</i> is a fungus that displays disease suppressing properties compared to other fungi. It is widespread and degrades organic material and other fungi.
Turbulent flow	Motion of fluids in which local velocities and pressures fluctuate irregularly, in a random manner.
Ultrafiltration	A pressure-driven filtration process using membranes that retain particles of colloidal size and solutes of high molecular weight. The applied water pressure lies in the range of 0.5 to 5 bar.
Ultrasonic	Relating to acoustic frequencies above the range audible to the human ear, or above approximately 20000 hertz.
Ultra-violet (UV)	Ultraviolet (UV) light is electromagnetic radiation with a wavelength shorter than that of visible light. It is used in water treatment for disinfection of oxidation processes and to destroy residual ozone.
Under deposit corrosion	Type of corrosion occurring underneath a deposit on a material in contact with water. Under deposit corrosion can for instance be caused by biofilm in piping.
Urbanization	The state of being or becoming a community with urban characteristics.
USB	Universal Serial Bus (USB) is a serial bus standard to interface devices. USB is intended to help retire all legacy, slower serial and parallel ports.
UV oxidation	A process based on the oxidation of compounds in water by the irradiation with UV light.
UV-transmission	Measure for the transparency of a medium (like water) for UV radiation.
Virus	Any of various simple sub microscopic parasites of plants, animals, and bacteria that often cause disease and that consist essentially of a core of RNA or DNA surrounded by a protein coat. Unable to replicate without a host cell, viruses are typically not considered living organisms.
VROM	Ministry of housing, spatial planning and the environment in the Netherlands (Nederlands ministerie van Volkshuisvesting,



	Ruimtelijke Ordening en Milieubeheer).
Waste water	Wastewater comprises liquid waste discharged by domestic residences, commercial properties, industry, and/or agriculture and can encompass a broad spectrum of contaminants.
Water contamination	Water polluted with harmful micro-organisms.
Water disinfection techniques	Any of the techniques that can provide disinfection of water.
Water pollution	Water containing one or more chemical or physical polluting substances.
Water purification	The whole of processes required to improve the quality of waste water by the removal of contaminants. The goal is to produce a water that can be used as drinking water, process water or can be discharged.
Water purification plant	An installation that is used for water purification, i.e. a process of removing contaminants from a raw water source, with the goal to produce water for a specific purpose.
Water quality monitoring	The act of continuously monitoring the quality of water with sensors and the analysis of samples on a periodical basis.
Water re-use	To collect water after its primary use for recycling purposes. Water re-use is applied in a wide range of applications.
Water softener	A device that monitors and reduces the hardness of the water.
Water treatment	Any of the techniques used for disinfecting water, pollutant removal or improving the water quality.
Watt	The watt (symbol: W) is the unit of power, equal to one joule per second.
Wavelength	In physics, wavelength is the distance between repeating units of a propagating wave of a given frequency. For visible light, the wavelength is most easily described as the “color” of the light.
Wetland	In geography, a wetland is an environment at the interface between a truly terrestrial ecosystem and an aquatic system.
Wildtype isolate	Isolate of a free-living micro-organism that was not (genetically) modified.



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Incorporated with limited liability under the law of Belgium
Registered office: Brechtsebaan 30 - 2900 Schoten
Register of Legal Entities (Antwerp): 0478.049.157.

PUBLIC OFFERING TO SUBSCRIBE TO MAXIMUM EUR 15 MILLION IN NEW SHARES WITH VVPR STRIP WITHIN THE SCOPE OF A CAPITAL INCREASE, EXCLUDING THE EXISTING SHARES OF THE OVER-ALLOTMENT OPTION UP TO A MAXIMUM OF EUR 2.25 MILLION (THE "OFFERING")

SUBSCRIPTION FORM

I, undersigned (surname, first name).....

domiciled at, (street).....nr,

declare, having acquainted myself with the Prospectus concerning the Offering mentioned above, that I wish to acquire¹⁰⁶ shares of Ecodis NV at the subscription price communicated in the press on June 6, 2007.

I request the bank to deduct the total subscription price of my account nr ... - - ... at the Payment Date and on June 26, 2007 at the latest.

I accept that the Shares are delivered to me in the form of book-entry.

I undertake to accept any allocation according to the way in which it has been determined.

Bank Degroof will make reasonable efforts to ensure that private investors resident in Belgium and investors subject to Belgian taxation on legal persons, in this order of priority, will be allocated New Shares with VVPR strips. Notwithstanding these reasonable efforts as regards the allocation of the VVPR Strips, all investors could find themselves allotted New Shares with VVPR strips or Existing Shares without VVPR strips or a combination of the two. Neither the Selling Shareholders, nor the Company, nor Bank Degroof, will assume any responsibility towards investors with regard to the allocation of the Shares offered (New with VVPR strips or Existing without VVPR strips)

Made in two originals at on..... June 2007

The financial intermediary

The subscriber

¹⁰⁶ Indicate the requested number of shares

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LEAD MANAGER, BOOKRUNNER & LISTING SPONSOR



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