



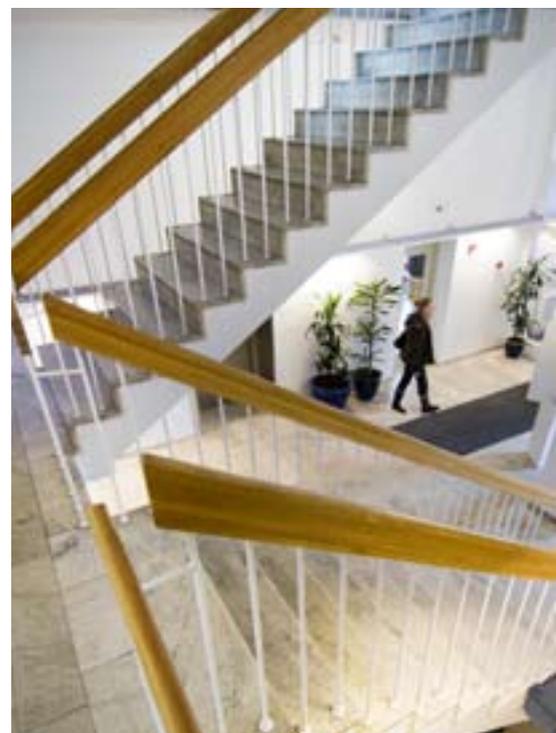
# This is IVL

- Founded in 1966 by the Swedish government and Swedish business, IVL is now Sweden's leading applied research organisation, and an important meeting place for the research, business and public sectors.
- Part of IVL's strategy is to develop and maintain close cooperation with national and international research institutes, universities and institutes of technology. This is facilitated by the location of its offices on the campuses of the Royal Institute of Technology, Stockholm (KTH) and Chalmers University of Technology, Göteborg (CTH).
- KTH and IVL have formalised their cooperation by establishing the Centre for Sustainable Development (CHU), while CTH and IVL cooperate within organisations including the Centre for Environmental Assessment of Product and Material Systems (CPM).
- The company's areas of priority are climate and energy, sustainable building, water, resource-efficient products and waste, air and transport, as well as sustainable production.
- IVL Analysis performs advanced chemical analysis in its own laboratories.
- New technologies for more resource-efficient and less environmentally harmful production are under development in IVL's experimental laboratories.
- IVL Knowledge provides professional training in the entire area of sustainable development.
- Other areas of specialisation include the working environment, environmental impact assessment (EIA), life-cycle assessment, environmental analysis and environmental quality evaluation. IVL performs environmental monitoring and reports environmental emission data in Sweden on behalf of the Swedish Environmental Protection Agency.
- Hammarby Sjöstadsverket, the only full-scale plant in northern Europe for the development and testing of new wastewater treatment technology, has been owned jointly by IVL and KTH since January 2008.
- Over the years, IVL has been highly successful in securing funds from the EU Framework Programme for Research. IVL is conducting several of the relevant research projects and is being appointed with increasing frequency to coordinate major European projects.
- IVL employs 158 people, 28% of whom are qualified researchers and 62% hold masters degrees in engineering or other academic qualifications. Three employees hold adjunct professorships at Swedish universities or third-level institutions.
- In 2007, research projects accounted for 56% and contract assignments for 44% of IVL's revenue from fees.
- IVL reported net sales of SEK162 million in 2007 (2006: SEK188 million).
- Both contract and research activities are conducted from a holistic perspective with the aim of accelerating sustainable growth. The broad scope of its activities, combined with its multidisciplinary approach, enables IVL to offer its customers holistic solutions, as well as solutions to highly specific problems.



# Contents

The MD's view	2
Climate issue may demand new research agenda	4
Climate and energy	6
Sustainable building	7
Water	8
Sustainable production	9
Air and transport	10
Resource-efficient products and waste	11
Summary of business	12
Directors' report	13
Board of directors and management group	23
Organisation chart	24





## The MD's view



BJÖRN LUNDBERG

MD

Among other things, the purpose of research is to lead the way and define scenarios, explain phenomena that occur and, as far as practically possible, offer solutions to problems that arise. Since the company has been active in the environmental field since the 1940s (and since 1966 under the IVL name) – a long time in environmental terms – it is fair to ask how useful our activities have been and what influence we have had. This question is particularly relevant given that the consequences of modern-day environmental disasters are more far-reaching than they were in those early days.

Furthermore, the global environmental threat is now more firmly embedded in the public consciousness. Most stakeholders, including industry, politicians and the public, now recognise the importance of the environmental issue. In the last thirty years, the increase in the number of researchers, companies and organisations working in the environmental sector has been practically explosive, although the results of their efforts appear somewhat futile as the threat scenario appears to worsen.

In themselves, the issues are not particularly difficult to understand. To take one example, we on Earth already live in a 'greenhouse', with an atmosphere that provides us with a certain type of climate. If the gaseous composition of that atmosphere is changed by the addition of carbon atoms from the Earth's crust, the conditions in the greenhouse – in other words, our climate – will also be changed. The problem is that simple. Swedish scientist Svante Arrhenius described the risk of climate change over a century ago in 1898. And his calculations – which were performed without the benefit of modern tools – are not significantly different from the most recent figures published by the UN Intergovernmental Panel on Climate Change (IPCC).

It is obvious, therefore, that the environment is an area in which the road from realisation to action is a very long one. For this reason, we may actually expect many of the reported environmental threats to become a reality. The result should be to focus our work, both our own and that of many other researchers in the area, on the expected consequences of future environmental changes.

Thus, we note with satisfaction that the Swedish Ministry of the Environment *Commission on Climate and Vulnerability* considers the institutional sector to be equipped to carry out research into adaptation and vulnerability in the wake of climate change. Unfortunately, the commission proposes the establishment of a special climate research institute, something that must be regarded as completely counterproductive since climate adaptation, more than any other issue, concerns all sectors of society and, as a result, must be dealt with on a multidisciplinary basis.

Environmental research must also be harmonised more with technological development. The new nanotechnology is an outstanding example of how we are running the risk of repeating historical mistakes. While the potential and applications of nanotechnology are well documented, the risks associated with particles so small that they can

## Major events in 2007

In spring 2007, IVL arranged a number of well-attended events on a climate theme, including a 'climate breakfast' in which the first two years of the EU emissions trading system were assessed, while the concept of climate neutrality was subjected to critical study at a keynote seminar in May.

### *Clean air and climate*

At a workshop for researchers and decision-makers from Europe, North America and Asia organised by IVL in Göteborg, it was agreed that the clean air and climate issues call for joint solutions. This was also the finding of the major ASTA research programme directed by IVL, which was concluded during the year.

### *Climate Challenge*

In recent years, IVL has also expanded its interfaces with the community, firstly through the training and seminar activities conducted by IVL Knowledge, and secondly through the *Climate Challenge* competition that attracted thousands of secondary school pupils in its very first year. The winners received their prizes from Minister for the Environment Andreas Carlgren at the end of May.

### *Climate and vulnerability*

On behalf of the *Commission on Climate and Vulnerability*, IVL carried out a study of the short, medium and long-term effects on the climate of future heating and cooling requirements in the construction and property sector.

### *Effects of ditch cleaning*

Based on widespread interest in increasing the production capacity of forests by measures such as ditch cleaning, and in collaboration with stakeholders including the Sveaskog company and the Swedish Forest Agency, IVL initiated a research project to examine the potential effects of this activity on water ecosystems.

### *CDM and China*

During the year, IVL was assigned by EuropeAid to examine how the Clean Development Mechanism (CDM) of the Kyoto Protocol might become an even stronger component of Chinese efforts to achieve sustainable development. The project has a budget of just over SEK30 million.

### *Emissions from goods*

The Swedish Environmental Protection Agency has appointed IVL to lead its *Emissions from goods* research programme. Scheduled to take three years and with a budget of SEK16 million, the purpose of the programme is to determine the precise extent of the problem of chemical emissions from goods to the environment.

### *Sustainable City Award*

In September, in cooperation with City of Malmö, IVL presented the Sustainable City

barely be measured, and are capable of penetrating cell tissue, should provide reason for caution. However, far too little research has been carried out in this area.

Another example that has attracted attention recently is the artificial sweetener sucralose, which is being used globally in a variety of light (diet) products. IVL has shown that sucralose passes straight through wastewater treatment plants and levels in the environment appear to be increasing. This is the type of area in which IVL and other environmental researchers must be involved at an earlier stage.

The climate issue, the huge demand for environmental engineering knowhow, the vulnerability of companies that manufacture products or employ production methods that are not accepted by the market, and the growing awareness of the public are among the factors that will make the need for an institute such as IVL even more important in the future. At the same time, greater cooperation across disciplinary boundaries will be demanded of the research community. In future, social planners, economists, product developers and environmental researchers must work in a more integrated manner – a development that would be facilitated by basing research financing more on multidisciplinary cooperation rather than on the 'drainpipe' model. And, above all, by utilising the applied research that the institutes can offer and is needed to deliver the rapid results needed today.

To answer the original question, there is no doubt that IVL has performed a useful service. Without false modesty, we can safely claim to have helped Swedish industry to achieve a leading position in terms of environmental attitude. In over 40 years of existence, IVL has contributed to a thorough cleanup of the environment and practically all of the traditional problems in that area have been solved. Now, we must mobilise our forces to tackle the climate question and the other, more complex environmental issues.

BJÖRN LUNDBERG



Stockholm, February 2008



## Climate issue may demand new research agenda



PERINGE GRENNFELT

Looking back on 2007 in a few year's time, we will probably regard the year as a turning point in our view of the climate issue. The IPCC reports and the *Stern Review Report on the Economics of Climate Change* have given the issue an impact that has raised its priority amongst practically all international organs. The EU decision to adopt clear climate goals for 2020, the conclusions of the G8 group on the climate issue, and several other initiatives created the basis for the decision of the UN Climate Change Conference in Bali to adopt an action plan to draft a new climate protocol. Although many difficulties remain to be overcome, Bali represents a major step towards a global consensus on the issue.

IPCC's exhaustive analyses of the climate issue shows that research plays a key role. Although criticism of some research findings continues to be expressed by individual stakeholders and groups, those who doubt the importance of the climate issue are becoming increasingly fewer in number. But what type of research will be needed in future? Will our research agenda be the same as in recent years?

Established 20 years ago, the IPCC has played a very decisive role in analysing and reaching conclusions on the climate. This very difficult task has been achieved in an exemplary manner; from the comprehensive range of natural climatic variations, it was necessary, firstly, to identify the signals that could be attributed to the effects of the greenhouse gases and, secondly, to predict future climatic trends with sufficient accuracy. As a result, we now have a completely different basis for reaching political decisions than has been the case hitherto.

Meanwhile, the political temperature has also risen and 'action' has now become a keyword in political circles. However, action requires a foundation. If, for example, we are to increase the proportion of renewable energy sources as part of our climate programmes, we will need to know which of the possible options offers the optimum approach, not only from the climate viewpoint, but also in terms of other issues, such as the environment, the safeguarding of natural resources and employment.

Development Award to the winning nominee, the Helsinki suburb of Viiki.

#### *New business operation*

During the year, IVL formed the wholly-owned subsidiary EEQ to develop methodologies to enable the process industry to integrate economic, environmental and quality-related goals in real time in day-to-day operations. The methodologies in question are at the leading edge of research, and the steel and oil industries are the main target customers.

#### *Medicines in the environment*

A notable study undertaken by IVL on behalf of the Swedish Environmental Protection Agency indicates that tranquilisers and anti-anxiety drugs are leaking into the environment through sewage treatment plants.

#### *ENERO chairmanship*

In 2007, IVL assumed the chairmanship of ENERO (European Network of Environmental Research Organisations). The ENERO partnership has been successful and IVL is currently participating in three major EU projects as a result.

#### *Climate calculators*

The climate calculators being developed by IVL were in demand during the year. These enable private individuals, companies and organisations alike to estimate the magnitude of the greenhouse gas emissions generated by the individual and/or activity in question. Similar calculators have been developed to enable the carbon footprint of a product to be calculated.

#### *Sjöstadsverket handover*

At a ceremony held on 5 December, Ulla Hamilton, environment and property commissioner of the City of Stockholm, handed over joint responsibility for the city's Hammarby Sjöstadsverket research plant to IVL and KTH. This provides more players with access to northern Europe's leading wastewater treatment research facility.

#### *Clipore takeover*

In 2007, IVL took over management of the climate policy research programme *Clipore*. The programme, which has received the green light for a further three-year period, has a total budget of approximately SEK 109 million, making it one of the biggest projects of its kind in Europe.

#### *Focus on asbestos*

IVL's asbestos report attracted attention at the end of the year. Although the use of asbestos was banned 26 years ago, people are still contracting asbestos-related lung cancer. One theory is that personnel involved in removing asbestos are not adequately protected by their breathing equipment.

The adaptation of our society to forthcoming climate change will also call for well-founded decision-making bases – in many cases much sooner than research can deliver. This will impose even greater demands on research to deliver well-supported conclusions – findings that include analyses and evaluations of risks and uncertainties.

Are we in Sweden organised to meet these demands? In its final report, the Commission on Climate and Vulnerability notes that research into risks and adaptation needs to be strengthened. In this context, it is important to remember that the same applies to synthetic and analytical resources. By international standards, Swedish preparedness and resources for performing advanced analysis are poor.

We have a well-developed public inquiry system that can analyse consequences and develop political action alternatives from a societal perspective. However, this needs to be complemented by a system that can also analyse and evaluate future climate trends, their societal consequences and various action alternatives with a high degree of scientific credibility.

In recent years, IVL has increasingly developed its expertise in system analysis, focusing on the environment-related problems of society in relation to various issues, with particular reference to the climate issue. With the expertise and structure we have built up, we now have the resources to analyse the consequences of climate change and climate politics as they affect society, business and ecosystems.

# Climate and energy

Global climate change is one of the biggest challenges of our time. During the year, the UN Intergovernmental Panel on Climate Change (IPCC) published new reports confirming that the climate is changing at an accelerating rate and that human impact on it is significant.

IVL's work on the climate issue has never been more important and the area is, therefore, one of our highest priorities. Climate considerations form an aspect of many parts of our work, including consultancy assignments and research projects alike.

## Climate policy and control mechanisms

Climate policy and control mechanisms is a priority research area in which we are working on the formulation and consequence analysis of Swedish and international climate policy. IVL leads *Clipore*, one of Europe's biggest research programmes in the area, undertaking projects for companies and public authorities both in Sweden and abroad. We continuously monitor international negotiations in the area and analyse their relevance to Swedish business.

## Causal relationships and corrective action

We investigate the sources of emissions, their effects on ecosystems and the operation of feedback mechanisms between different systems, with modelling and analysis of emissions and greenhouse gas uptake as central elements. In terms of mitigation of emissions, the focus of our interest is on feasible methods of reducing emissions, and how costs of such measures

can be allocated within society. We have completed several projects designed to generate greater knowledge of the actual cost of cutting emissions in different sectors, and we are also working with individual industries to develop more efficient processes.

## Adaptation to climate change

In the context of adaptation to climate change, our work ranges from technical issues relating to infrastructural development to strategic analyses of how society as a whole can be made less vulnerable.

## Energy systems and energy efficiency

There is a growing need for new knowledge as to how the energy systems of the future will function. As an example, the significantly higher use of bioenergy envisaged by the EU will have consequences far beyond the energy sector as competition for biomass increases. In this area, IVL is conducting the BOKONK project, one aim of which is to clarify which factors generate most competition for biomass from forest and agricultural raw materials, and to indicate the consequences to the forest industry and energy sector in Sweden.

## Energy efficiency

We are convinced that energy efficiency offers major gains, both to the climate and the economy. Energy efficiency often results in significant reductions at low, or even zero cost. IVL possesses top-class expertise in process optimisation and control, and we are working intensively with the construction sector to develop more energy-efficient building in Sweden.

## Climate strategies

It is becoming more and more important for companies, local authorities and other organisations to change and manage their activities more efficiently from the perspective of the climate. IVL provides assistance in developing strategies for this.

## Communication

We develop practical tools that enable individuals and companies to measure, reduce and communicate their climate impact. We are also working with schools to raise the level of knowledge and involvement among young people. An example is the *Climate Challenge* competition, which has become a major success and will continue annually.

## Climate policy in China – development of CDM

IVL is leading a major programme to develop CDM (Clean Development Mechanism) in China. The purpose is to strengthen the capacity for CDM in China and, in the longer term, to develop it in line with China's priorities and international climate negotiations. See [www.euchina-cdm.org](http://www.euchina-cdm.org) for further information.

## HOPE

The purpose of the HOPE (*How do Policy Instruments Function in a Competitive Electricity Market*) project is to analyse the influence of the EU's climate policy on the electricity market. The effects of the EU emissions trading system on price structures in the Nordic market is an aspect of particular interest.



# Sustainable building

The construction and property sector plays a key role in society's capacity to achieve sustainable development, accounting for a high proportion of its environmental impact in terms of the utilisation of resources, energy and chemicals.

The potential for reducing environmental impact is high, and the introduction of new technologies and decision-making processes calls for both careful planning and monitoring, and comprehensive, systematic communication.

We are conducting projects such as BASTA, whose purpose is to reduce the use of hazardous substances in building materials. BASTA has been developed in very close cooperation with the construction industry. The purpose of the *Environmental classification of buildings* project is to reduce the exposure to risk when handling products containing hazardous substances, carrying out demolition/rebuilding work and working on contaminated soil. We are also working to develop improved information regarding hazardous substances in existing buildings, to enable demolition and refurbishment operations to be carried out in a more environmentally compatible manner.

## Efficient energy utilisation in buildings

We develop cost-effective methods and tools that facilitate decision-making relating to efficient energy utilisation in the built environment, resulting in reduced environmental impact, including lower greenhouse gas emissions and a higher proportion of renewable energy sources (*Energy Performance Contracting*). The concept of energy efficiency includes both buildings that require very low quantities of total and purchased energy, and those whose energy systems qualify them as zero-emission houses.

## Good examples

We focus particularly on compiling and communicating the experience gained from good examples of cost-effective and energy-efficient buildings, how energy-efficiency demands can be applied, how different control methods and incentives can be used to promote development, and what obstacles and barriers need to be removed. An example is provided by the work carried on within the framework of the joint European research programme *Secure*, in which IVL is working to develop energy plans for a number of European countries.

## Anavitor

Anavitor is a tool developed by IVL for the Swedish building market to enable LCC (Life-Cycle Cost) and LCA (Life-Cycle Assessment) to be calculated on the basis of the information contained in a capital cost estimate to which life-cycle data and environmental load data are added. Among other things, this means that the user can determine how the various stages of the object affect the climate.



## Water

At this time, work on water issues in Sweden and in Europe, in companies and public agencies, is being adapted to new conditions in which a series of different EU directives is affecting the playing rules.



The EU Water Framework Directive, REACH and the EU Marine Strategy Directive will have a major impact on our future work on Swedish environmental goals and water issues. This work must be characterised by a systems approach, consequence analysis, scientific thinking and participation.

IVL is well equipped to meet these new challenges, which require expertise in water status, mapping of sources, modelling of chemicals, nutrients and ecosystems, cost-benefit analysis of various measures, and control instruments to be interlinked to a growing extent. In IVL's view, the water industry and other stakeholders will become involved to a greater extent in water resources planning, calling for well-embedded decision-making process founded on the best possible scientific evidence.

### Major EU project coordination

IVL works on water issues on many different scales, and our participation in a number of research and development projects within the EU enables us to develop the necessary knowhow and tools. In this context, it is worth noting that we act as coordinator of two major research and development programmes for developing methods of integrated analysis and action planning in the water area under the umbrella of the EU's Sixth Framework Programme. The first of these is *TWINBAS*, which was concluded in 2007 and was succeeded by *TWINLATIN*, whose purpose is to bridge gaps in knowledge and develop methods for the water resources planning process, for river basins in both Europe and the developing nations. The second project is *SOCOPSE*, whose objective is to develop a decision sup-

port system for the management of priority pollutants and new chemicals in Europe ([www.socopse.eu](http://www.socopse.eu)).

### Habitat modelling and water declaration

We have also identified a particular need to develop methods of hydromorphological measures with the aid of habitat modelling and cost-benefit analysis. Taking note of the strongly growing interest in increasing forest production capacity by methods such as ditch cleaning, IVL has initiated a joint project with the Sveaskog company to study the potential effects of this activity on water ecosystems.

Water of good quality is a limited resource from an international perspective and will become an increasingly important factor as companies plan for the future. For this reason, we have begun to develop a water declaration for companies.

# Sustainable production

In many respects, modern industrial activities differ significantly from comparable operations 20-30 years ago. Today's production is automated, and is geared increasingly towards improved quality and higher output.

This is accompanied by the optimisation of resources in terms of investment, and reductions in natural and human resources.

The climate threat is powering the development of environmental improvement measures.

Sustainable production calls for multi-disciplinary solutions. Technical development is key, but not sufficient; new solutions taking joint account of product quality, process economy and environmental impact are needed. This view has permeated IVL's work over the decades, leading in time to greater understanding and impact within industry and among public agencies.

By sustainable production, we mean that the environmental impact resulting from the production of goods and services shall be sustainable from a life-cycle perspective. Goods and services shall also be socially sustainable. Although the focus is on the working environment and sustainable working life, ethical issues may also be involved. A sustainable economic dimension is another condition of sustainability.

## Sustainable working life

Organisational management and working practices also need to be developed.

Environmental management systems have been in use for several years, and the trend now is towards other, more efficient systems with a more holistic perspective. The relationship with operational management, including a sustainable working life, is an area in which IVL is working actively. The *VerkSam* project is one example of this. An interactive support programme for operational development in small companies, *VerkSam* ([www.verksam.net](http://www.verksam.net)) covers eleven areas relating to sustainable development, including environmental impact, working environment, working climate, healthy organisations and suppliers.

Dealing with the development of support for the purchase of sustainable cleaning services, another project will formulate requirements governing both the external environment and work environment, as well as ensuring that the contractor is financially sound.

## Small companies

*Public and private business intelligence in small companies (OMS)* is a project financed by the Swedish Business Development Agency (NUTEK) in which a tool has been developed to help improve competitiveness and integrate environmental issues in corporate strategy activities.

## Closed processes

A preliminary study was carried out by representatives of IVL to establish the feasibility of improving the environmental situation around industrial parks in Hyderabad, India by introducing closed processes. This will be followed up in the form of a project to introduce closed processes in 2008. *SensorControl* and *Optilub* are two EU-financed projects whose overall goal is to develop techniques of closing pickling acid baths and recycling rolling oil emulsions in steel mills.

## Process optimisation

Parts of IVL's Process Optimisation Pack (POP) has been installed at the Nynäs refinery in Göteborg in cooperation with Emerson Process Management. The purpose is to equip the operators with a real-time tool for monitoring, troubleshooting and controlling the process. The tool offers improved utilisation of raw materials, energy efficiency and higher yield.



# Air and transport

Although comprehensive measures to reduce emissions of atmospheric pollutants in Europe has been implemented over the last 10-20 years, much remains to be done before the political objectives have been achieved.

As the most important player in the context of anti-pollution legislation at this time, the EU Commission has tabled a clean air strategy for the period up to 2020, in which remedial action will be driven mainly by health considerations and the main focus will be on particulates. That said, existing atmospheric pollution problems are far from being solved.

The problem of acidification remains, although sulphur precipitation has been reduced significantly. This has been replaced on the agenda by the various effects of nitrogen, the influence of precipitation on the composition and biodiversity of vegetation, and a decline in forest production due to the contribution of nitrogen oxides to tropospheric (ground-level) ozone.

## Air quality

In the area of air quality, our primary focus is on the development of monitoring strategies, and measurement and modelling studies, as well as population exposure in relation to EU directives, environmental quality standards and the achievement of national environmental targets. At present, particulates, nitrogen oxides and ozone are considered to be the most important pollutants from the perspective of health.

## Effects of air pollution on ecosystems

We study exposure to air pollution and its effects on ecosystems, with particular reference to dose-effect relationships and interaction with other factors, such as climate and land use. Pollutants of interest include acidifying and nutrient substances, tropospheric ozone, mercury and organic environmental toxins.

## Clean air strategies

The basis of activities in this area is provided by IVL's work to adapt and further develop the international GAINS (*Greenhouse Gas and Air Pollution Interactions and Synergies*) model for Sweden. This includes the study of both local and large-scale environmental and health problems, as well as the evaluation and follow-up of action strategies and controls.

## Emissions from transport

We study emissions from transport, and the effects of transport and logistics solutions. Current issues include the harmonisation and reliability of emission models and emission data, primarily for the road transport and marine sectors, and the environmental and health consequences, from local to global scale, of various transport and logistics solutions, including societal and corporate financial

aspects. One example is the *Traffic-generated breathable wear particles: formation processes, emission factors and occurrence from a remedial perspective* project of the Emissions Research Programme, whose purpose is to improve the basis of measurement for evaluating particulate levels and sources, and to propose more efficient action against them.

Another project is concerned with the measurement of particle emissions and noise from railways, together with an investigation of environmental impact and material wear. Using measurements made under actual conditions, the aim of this project is to provide a better picture of both environmental impact and the magnitude of wear.

We are working within the major EU *QUANTIFY* project to quantify the climatic effects of global and European transport systems, now and in the future.

## Environmental cost calculations

*Incorporation of environmental cost calculations in the planning and monitoring of goods transport by companies* is the title of a project whose purpose is to develop, implement and evaluate a tool designed to show the overall cost of a company's transport operations, including the case in which external costs are included.



# Resource-efficient products and waste

The demand for climate-smart and environmentally adapted solutions, technologies and products has grown dramatically with the significant increase in awareness of the importance of environmental issues in the last two years.

However, despite this new awareness, the consumption of goods and the volumes of waste continue to rise. This has led to a growing need for smarter consumption, production and waste management, and IVL is proposing future projects of this nature. Another major challenge ahead is to prevent the diffusive spread of undesirable chemicals to human life and the ecosystem by improving information systems for raw materials and goods, as well as by substitution.

IVL conducts both research-oriented and assignment-based projects in the following main areas:

- Products for sustainable development (sustainable in terms of environmental, economic and societal aspects alike)
- Prevention and management of waste
- Sustainable remediation of contaminated soil

## Environmental adaptation

IVL supports industrial concerns and other organisations with expert assistance in the environmental adaptation of products and services, the measurement and communication of environmental impact, and the development of decision-making bases for improving the environmental performance of products.

## Steel ecocycle

Financed by Mistra and the Swedish steel industry, the *Steel ecocycle* research programme develops various key processes in the steel ecocycle to maximise resource efficiency and minimise environmental impact. Working with the companies concerned, IVL produces dynamic LCA and LCC models based on the process optimisation methods that it has developed.

## Certified climate and environmental declarations

In the area of environmental performance communication, IVL has developed several certified environmental declarations and the first internationally certified climate declaration within the EPD system. [www.environdec.com](http://www.environdec.com)

## Sustainable waste management

IVL is conducting the Swedish Environmental Protection Agency's *Sustainable waste management* research programme. Among other things, this includes the study of how controls and recovery processes can be designed in a more environmentally favourable and economically efficient manner, and how the systems can be further adapted to the needs of consumers and companies. IVL is also performing a number of case studies in collaboration with industrial concerns and other players to examine possible improvements in collection, recovery, waste management and landfill operation.

## Soil remediation

In the area of soil remediation, there exists a major need for methods to facilitate management that is efficient for both the community and the companies involved. We are developing methods and tools for risk management and the classification of soils, as well as planning procedures designed to improve the efficiency of management, and to minimise costs and overall environmental impact. As an example, IVL is a participant in the Swedish Environmental Protection Agency's *Sustainable remediation* programme, as well as EU projects dealing with risk assessment and testing of remedial technologies for cleaning up contaminated soil in steelworks.



## SUMMARY OF BUSINESS

## SUMMARY OF BUSINESS AND FINANCIAL RATIOS (figures in SEK thousand)

	Group					Parent company				
	2007	2006	2005	2004	2003	2007	2006	2005	2004	2003
<b>Sales and profit/loss</b>										
Invoiced fees and expenses	162,561	175,170	197,151	151,477	147,434	162,347	175,071	196,918	151,435	147,434
Operating profit after depreciation	1,292	572	3,339	2,293	-4,401	1,123	-1,105	-1,334	181	-2,943
Operating profit after financial items	2,217	870	3,473	2,363	-4,176	2,047	-808	-1,203	250	-2,718
Profit margin	1.4	0.5	1.8	1.6	Neg.	1.3	Neg.	Neg.	0.2	Neg.
<b>Capital structure</b>										
Fixed assets	15,149	15,008	15,857	10,509	8,974	15,732	15,519	16,343	10,993	9,418
Current assets	83,016	85,332	78,592	68,851	69,381	82,539	85,015	78,236	68,701	69,121
Equity	41,684	40,197	39,856	37,122	35,522	28,094	26,401	26,247	24,950	24,938
Untaxed reserves	-	-	-	-	-	5,556	6,032	7,355	10,144	9,948
Current liabilities	51,128	54,703	49,250	37,382	38,634	64,621	68,101	60,977	44,600	43,653
Provisions	5,353	5,440	5,343	4,856	4,199	-	-	-	-	-
Total assets	98,165	100,340	94,449	79,360	78,823	98,271	100,534	94,579	79,694	78,539
Adjusted equity	-	-	-	-	-	32,094	30,744	31,543	32,254	32,101
Equity, annual funds	40,941	40,027	38,489	36,322	37,592	31,419	31,143	31,898	32,177	33,389
Capital employed, annual funds	99,253	97,395	86,905	79,092	77,065	99,403	97,557	87,137	79,117	76,734
Equity/assets ratio, %	42.5	40.1	42.2	46.8	45.1	32.7	30.6	33.4	40.5	40.9
Current ratio	1.62	1.56	1.60	1.84	1.80	1.28	1.25	1.28	1.54	1.58
<b>Profitability</b>										
Return on adjusted equity, %	3.9	1.6	6.5	4.7	Neg.	4.7	Neg.	Neg.	0.6	Neg.
Return on capital employed, %	2.3	1.1	3.8	3.2	Neg.	2.1	Neg.	Neg.	0.5	Neg.
<b>Other</b>										
Capital expenditure	3,671	3,538	8,545	5,316	2,348	3,671	3,538	8,545	5,316	2,348
Invoiced sales/employee, incl. expenses	1,022	1,062	1,248	1,017	1,017	1,028	1,068	1,254	1,023	1,024
Invoiced sales/employee, fees and analyses	944	915	976	808	730	948	919	981	813	735
Chargeability rate, %	64.6	65.8	67.0	66.2	65.9	64.6	65.8	67.0	66.2	65.9
Number of employees	159	165	158	149	145	158	164	157	148	144
Personnel costs per employee	587	546	533	491	480	592	549	536	494	484

**Profit margin**

Net profit after financial items as a percentage of net sales.

**Adjusted equity**

Total equity, plus untaxed reserves, less deduction of standard tax at 28%.

**Equity/assets ratio**

Adjusted equity in relation to balance sheet total.

**Return on equity**

Profit after net financial items and deduction of standard tax at 28% in relation to average adjusted equity.

**Return on capital employed**

Profit after net financial items plus interest expenses in relation to average balance sheet total.

**Chargeability rate**

Time charged to client as a proportion of total work attendance.

**Number of employees during year**

The number of employees for the year expressed in terms of full-time positions. The actual number of employees is higher because of part-time working and the fact that some employees work only part of the year.

**Current ratio**

Current assets divided by current liabilities.

**The board and managing director of IVL Swedish Environmental Research Institute Ltd. hereby submit their report and statement of accounts for the operating year 1 January 2007 to 31 December 2007.**

Owned jointly by the Swedish government and Swedish industry, IVL Swedish Environmental Research Institute Ltd. (IVL) undertakes research projects and contract assignments in the environmental area. Formed in 1966, the company employed a total of 165 people in Stockholm and Göteborg as of 31 December 2007. IVL has been a limited company since 1982 and reported net sales of SEK162.3 million in 2007.

**Business climate and future development**

The need for research and development to solve the major climate challenges is obvious. The needs of the business sector – especially small and medium-sized companies – for R&D to survive in tough international competition is significant. The institutional sector is considered capable of playing an important role in both of these areas. In this context, IVL, with its basis in environmental, energy and climate-related research, as well as its tradition of working with small and medium-sized companies, is particularly well equipped to meet these needs.

The Swedish institutional sector has been undergoing reorganisation for several years. This work was intensified in 2007 when an interdepartmental working group reviewed the Sörlin Report of 2006 and submitted a proposal – referred to here as the IDA Report – which recommends the introduction of basic subventions to the institutes and a new group structure to strengthen the sector as a whole.

The board and management of IVL are generally favourable to the proposal, and have been actively involved with the aim of ensuring that what are regarded as IVL's strengths will survive. This includes an ownership structure that will guarantee IVL's credibility and independence.

The *Commission on Climate and Vulnerability* also points out that the institutional environment is a particularly suitable basis for research and competence development relating to adaptation and vulnerability in the wake of climate change. A negative aspect, however, is the commission's alternative recommendation that sections of a number of institutes, including IVL, should be detached to form a separate climate research institute – an inappropriate move given that climate adaptation is a multidisciplinary issue that must be dealt with in the context of other important societal issues, such as infrastructure, the natural environment, the built environment and health. IVL sees promising potential for expansion in this area.

IVL is also planning for expansion in general terms and a comprehensive recruitment process was initiated in 2007 for this purpose.

**Ratio of research projects to contracts**

Revenue from fees during the year was divided between research projects and contracts in the ratio of 56% to 44% (compared with 59% and 41% respectively in 2006). In this context, research projects are projects funded jointly by the Swedish government and Swedish industry through the Foundation of the Swedish Environmental Research Institute (SIVL), as well as activities financed by grants from public research agencies, research institutes, the EU and similar bodies. Jointly-financed activities accounted for 16% (18%) of fee-based revenue and grant-aided activities for 40% (41%). IVL's research is an integral part of the company's operations and is a prerequisite to its facility for undertaking assignment activities using leading-edge competence. Contracts undertaken by IVL include both short-term consultancy and analytical assignments, as well as more comprehensive national and international contracts of a research and development nature.

*Current projects*

In 2007, major resources were devoted to applications for research funding within the framework of the EU's Seventh Framework Programme for Research and Technological Development (7FP). However, the return from the first round was disappointing although the applications in which IVL participated received uniformly high ratings. Competition was very intense and only ten percent of all

applications were successful. Many of the applications will be resubmitted later following revision.

The applications approved included the four-year *CADASTER (Case studies on the Development and Application of in-Silico Techniques for Environmental hazard and Risk assessment)* programme, in which IVL is a partner. CADASTER deals with the development of risk analysis techniques relating to the EU's chemicals directive REACH and has a total budget of SEK31 million. IVL is also a participant in the *Pass-Net* project under the umbrella of the IEE (Intelligent Energy Europe) programme. The purpose of Pass-Net is to disseminate knowledge concerning passive houses.

In 2007, IVL was assigned by EuropeAid, the European aid organisation, to direct a major programme to develop the Clean Development Mechanism (CDM) of the Kyoto protocol in China. The twin purposes of the programme are to reinforce the capacity of CDM in China and, in the longer term, to develop CDM in line with Chinese priorities and international climate negotiations. The project has a total budget of about SEK30 million.

In terms of national programmes, 2007 was a successful year. As an example, IVL was appointed by the Swedish Environmental Protection Agency to direct the three-year *Emissions from goods* research programme, with a budget of SEK16 million. Another project undertaken during the year was the MISTRA-financed *Entwined* programme, whose purpose is to develop tools to support researchers and other stakeholders in integrating environmental aspects in international trade. The *Swedish Clean Air Research Programme* and *Sustainable waste management* research programmes financed by the Swedish Environmental Protection Agency also commenced, both under the direction of IVL.

For the last three years, IVL has hosted the international research programme *Clipore*, whose ultimate purpose is to promote the development of a more effective national and international climate policy. During the year, Clipore was linked even more closely to IVL with the assignment of the programme managership to the company. Between 2004 and 2010, the budget for Clipore, which received the green light for a further three-year period, will total approximately SEK109 million, making it one of the biggest research projects of its type in Europe.

Several other climate-related research projects were undertaken during the year. These include a project designed to analyse the impact of the EU's climate policy on the electricity market, another to study the increasing competition for biomass and a third examining the role of district heating in the efficient production of biofuels. The growing demand for forest raw materials is increasing the level of interest in improving the production capacity of forests by methods such as fertilisation and ditch cleaning. IVL has accordingly analysed the environmental consequences of forest fertilisation and initiated a research project to study the effects of ditch cleaning on the aquatic ecosystem.

**Jointly-financed research**

In 2007, the Foundation of the Swedish Environmental Research Institute (SIVL), as owner of the company and principal of IVL's jointly-financed activities, developed the new forms of working and decision-making adopted in 2006. The six SIVL thematic committees were manned during the year and the committee work has been a success. The committees hope to be established on a long-term basis as an expression of the major expectations placed in their work.

Funding of SEK23 million for jointly-financed research was available to SIVL in 2007 through the Swedish government's grants to the Swedish Environmental Protection Agency and the Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (Formas), and the same amount has been allocated for 2008.

**Significant events during the year**

*Review of operation*

An internal review was carried out in 2006 to identify any structural problems and risks in IVL's existing operation, culminating in an action plan that was implemented during the first six months of 2007.

In addition to a limited reorganisation, this included measures to solve employment problems that had arisen. The measures yielded savings equivalent to wage and salary costs of about SEK6.0 million on an annualised basis, while a review of overheads yielded a reduction of approximately SEK1.4 million compared with the previous year.

A new recruitment process was also initiated during the year to meet the growing demand for services, primarily within the climate and energy sectors, but also in several other areas, such as the working environment and environmental management.

#### *Identity and value system*

Adopted at the end of 2006, IVL's new and more offensive strategy further reinforces the demands on employees to act professionally and on a common value basis. Similarly, all employees must share the perception of the management and board of the company's identity and role in society. For this reason, an in-house programme has been initiated to embed IVL's value system and identity. This work has been conducted among the executive management group and each department, as well as the employee organisations.

#### *Commercialisation of R&D*

Commercialisation of the research undertaken by IVL may result in faster dissemination of environmental and resource-saving technology to the business sector. During the year, preparations were initiated to establish a company (EEQ) to disseminate and expand the use of a methodology for integrating economic, environmental and quality-related goals in day-to-day activities. The company's proposed customer group is the process industry, mainly the steel and refining sectors.

Another example of commercialisation is Basta Online AB, a company established in January 2007. Owned by IVL (60%) and the Swedish Construction Federation (40%), the company will administer the Basta system for evaluating and phasing out particularly hazardous substances in building materials. Basta was developed under the direction of IVL with part finance from the EU Life fund.

#### *Communication and cooperation*

Translating research findings into practical applications is perhaps IVL's primary task. As a result, strengthening the company's interfaces with public agencies and business has been an important aspect of developing the operation. During the year, development of the organisation and thematic committees was ongoing. Apart from certain formal commitments to SIVL, the thematic committees are of major importance to prioritisation within IVL. The committees also function as a forum for discussing research findings and their consequences, as well as a channel for communicating this to the community at large.

IVL Knowledge's training and seminar activities have been developed further. One particular venture to make IVL more familiar to young people and within the educational system is the *Climate Challenge* competition, which attracted thousands of Swedish secondary school pupils in its very first year. The competition winners received their prizes from Minister of the Environment Andreas Carlgren at the end of May.

#### **Collaboration with universities and institutes of technology**

IVL's strategy includes the establishment and development of close cooperation with the business sector, international research bodies, universities and institutes of technology, an aspect reflected, among other things, by the research projects described above. As part of this, IVL has also formalised its cooperation with both the Royal Institute of Technology, Stockholm (KTH) and Chalmers University of Technology (CTH).

#### *Centre for Sustainable Development (CHU)*

IVL's cooperation with KTH is conducted within the framework of the joint Centre for Sustainable Development (CHU). Initially, until 30 June 2009, CHU will receive basic annual funding of SEK2 million each from IVL and KTH. Activities are conducted in three profile areas – Sustainable building, Resource-efficient products and sustainable products, and Water. A series of preliminary studies has been undertaken in areas including sustainable fuel supply, the 'Restore the million' programme, wave-powered seabed aeration of the Baltic Sea and the 'zero-emission' house.

#### *Hammarby Sjöstadsverket*

The Hammarby Sjöstadsverket research facility was handed over to IVL and KTH by the City of Stockholm and the Stockholm Water Company at a ceremony in December. A total of SEK34 million of public money has been invested in the plant, which was established in the early 2000s to develop methods of sustainable wastewater treatment for the future.

IVL and KTH are the joint owners of the plant within the framework of CHU. Given that ownership structure, Hammarby Sjöstadsverket will be a national resource for the development of wastewater treatment technology. CHU has also opened the facility to outside players, with ITT Flygt and the Swedish Water & Wastewater Association (SWWA) among the first to use it. Activities to the value of over SEK2 million have been planned for Sjöstadsverket immediately following the takeover.

#### *CPM*

IVL operates the Centre for Environmental Assessment of Product and Material Systems (CPM) in partnership with CTH. At CPM, IVL is conducting one project on sustainable transport and another to develop methods of extra-financial analysis, with the focus on evaluating the environmental profiles of companies.

#### **Investment**

In 2007, IVL invested SEK2.5 million in new laboratory analysis equipment in the form of a liquid chromatograph and mass spectrometry detector (LC-MS), which is considered to be of strategic importance to the laboratory's future. With the new equipment, IVL will be better able to meet the growing demand for special analyses, such as screening investigations and monitoring 'new' toxins in air and water.

#### **Environmental and quality management**

IVL deals with environmental and quality issues within the framework of an integrated management system, which was certified under ISO 14001 in 2002 and ISO 9001:2000 in 2003. Since 1992, much of the company's work relating to sampling, field measurement and analysis has also been accredited by Swedac in accordance with SS-EN ISO/IEC 17025.

Environmental and quality activities are governed by the company's environmental and quality policies, which are implemented in the form of overall and specific goals. A number of environmental aspects of significance to IVL's environmental activities have been defined. Of these, the customer advisory service is by far the most important. In this area, procedures for competence development, report auditing and in-house project evaluation help to minimise the risk of providing IVL customers with incorrect and/or deficient advice. In the same way, IVL's quality programmes are focused on the relationship with the customer, with the aim of continually ensuring and monitoring customer satisfaction with our services.

An analysis of IVL's environmental footprint was made in conjunction with a seminar on climate compensation arranged by the company. This showed that air travel, especially the many intercontinental flights undertaken by staff, accounted for by far the highest proportion of the company's climate impact. Work to examine the possibilities of replacing some of the more routine flights by video conferencing has been commenced. Video conferences have been used regularly for several years to replace travel between the Göteborg and Stockholm offices.

During the year, work continued on the development of a new operational system in which all activities will be gathered within a number of processes to provide the company and its employees with guidance and support in their day-to-day work. Environmental and quality activities are integrated in the processes.

#### **Net sales, net income and capital structure**

##### *Group*

The Group's net sales for the accounting year totalled SEK162,561 (175,170) thousand, yielding a net profit after financial items of SEK2,217 (870) thousand. The net profit after taxes was SEK1,463 (406) thousand. The return on adjusted equity was 3.9 % (1.6%) and the return on capital employed 2.3 % (1.1%).

The Group's total assets fell to SEK98,165 (100,340) thousand and its total equity capital to SEK41,684 (40,197) thousand. Cash flow was negative at -SEK8,190 (+6,846) thousand.

Capital investment in inventories and equipment totalled SEK3,671 (3,538) thousand. The equity/assets ratio was 42.5 % (40.1%).

#### Parent company

IVL's net sales for the accounting year totalled SEK162,347 (175,071) thousand, resulting in a net loss after financial items of SEK2,047 (-808) thousand. The net profit after taxes was SEK1,693 (153) thousand.

Total assets amounted to SEK98,271 (100,534) thousand and total equity capital to SEK28,094 (26,401) thousand. Cash flow was negative at -SEK8,453 (+6,702) thousand.

Capital investment in inventories and equipment totalled SEK3,671 (3,538) thousand. The adjusted equity/assets ratio increased to 32.7 % (30.6%).

#### Parent company employees

##### Structure and personnel turnover

During the year, the number of employees averaged 158 (164), of whom 53% (52%) were men and 47% (48%) women. Of the workforce, 28% (26%) hold postgraduate degrees, while 62% (63%) hold masters degrees in engineering or other academic qualifications.

During the year, 14 (16) temporary employees left the company for other positions, while 2 (4) employees retired on pension. Eight (13) new employees were recruited in the areas of working environment, information and communication, climate and energy, and IT.

##### Competence development

In 2007, competence development activities were carried on in three main areas with funds from the IVL staff training foundation:

- Active involvement of junior colleagues in the company's customer and network development activities;
- Managerial and leadership development, as well as special initiatives in communication and presentation techniques. So far, 23 employees have taken part in the latter activity, which commenced in autumn 2006. Training in leadership development for younger employees was initiated in 2007. This involves 11 employees, 3 of whom completed the course in the autumn.
- Individual competence development, which is administered through application to the council. Thirty-one employees have been granted funding from this source for competence development in areas such as analysis and modelling. To date, 19 of these have completed training.

##### Chargeability rate

The chargeability rate for the period was 64.6 % (65.8%). Chargeability rate is defined as the proportion of total attendance time invoiced to the customer. The remaining (in-house) time is devoted to marketing, training, technical maintenance, management and administration.

##### Absences and holidays

During the year, total absences, including holidays, accounted for 22.3 % (23.7%) of normal working time. Sick leave accounted for 1.72 % (2.23%) and holiday time for 9.58 % (9.09%). Leave of absence accounted for 8.68% (9.88%), of which 7.39 % (8.85%) was parental leave. Normal working time is defined as working time including holiday time and overtime worked, less absences due to sick leave, sickness of a child, parental leave or other leave of absence, as well as compensatory leave. The same basis is used to calculate the average number of paid-up years in Note 5 Personnel costs.

##### Special report on sick leave for period 1 January 2007 to 31 December 2007

Under the Swedish Annual Accounts Act, annual reports are now required to contain information on employee sick leave. The figures must be stated as a percentage of the employees' total normal working time and must also include details of continuous sick leave totalling 60 days or more (defined as long-term sick leave), figures for men and women, and sick leave in different age groups. In the following summary, sick leave is shown as a percentage of normal working time, less leave of absence and parental leave. The method of calculation is, therefore, different to that used above for absences and holidays.

Group	Total sick leave as percentage of normal working time		Long-term sick leave as percentage of normal working time	
	2007	2006	2007	2006
All employees	1.74	2.54	0.15	0.42
Women	2.1	3.11	0.23	0.55
Men	1.38	2.01	0.06	0.29
29 or younger	1.86	1.67	0	0
30-49	1.47	3	0	0.47
50 or older	2.24	2.05	0.47	0.46

Personnel turnover, %	2007	2006
Number of employees to resign as percentage of average workforce for year	8.9	6.1
- including pension	10.1	9.8

Age distribution, %	2007	2006
Age		
20-29	10	14
30-39	36	31
40-49	24	26
50-59	17	15
60-69	13	14
Average age: 42 (43) years		

Key financial indicators/ employee (figures in SEK thousand)	2007	2006
Sales, excl. expenses	948	919
Salaries	592	549
Net profit/loss after financial items	13	-5

Length of service, %	2007	2006
Length of service, years		
-2	14	18
2-10	45	42
> 10	41	40
Average length of service: 12 (12) years		

Qualifications, %	2007	2006
PhD	24	21
Other research qualification	4	5
Graduate engineer	32	31
Other academic qualification	30	32
Technical high school qualification	10	11

#### Proposed appropriation of profits (figures in SEK)

The following funds are available to the Annual General Meeting:

Profit carried forward	18,001,229
Profit for year	1,692,708
<b>Total</b>	<b>19,693,937</b>

The board and managing director propose that the total profit be distributed as follows:

To be carried forward	19,693,937
<b>Total</b>	<b>19,693,937</b>

See the income statement, balance sheet, cash flow statement, and notes to the financial statements and accounts for information on the profit reported by the company and the Group for the financial year, as well as the general financial position as of 31 December 2007. All figures are in SEK thousand.

## INCOME STATEMENT

## INCOME STATEMENT (figures in SEK thousand)

		Group		Parent company	
		2007	2006	2007	2006
<b>Net sales</b>	Note 1	162,561	175,170	162,347	175,071
Change in work in progress	Note 2	6,368	-2,397	6,207	-4,066
Other operating income	Note 3	613	508	613	508
		<b>169,542</b>	<b>173,281</b>	<b>169,167</b>	<b>171,513</b>
<b>Operating expenses</b>					
Expenses		-36,650	-42,038	-36,650	-42,038
Other external expenses	Note 4	-32,409	-33,738	-32,247	-33,693
Personnel costs	Note 5	-95,511	-92,086	-95,479	-92,057
Depreciation of tangible fixed assets	Note 6	-3,664	-4,847	-3,652	-4,830
Depreciation of capitalised expenditure for software development	Note 6	-16	-	-16	-
		<b>168,250</b>	<b>-172,709</b>	<b>-168,044</b>	<b>-172,618</b>
<b>Operating profit</b>		<b>1,292</b>	<b>572</b>	<b>1,123</b>	<b>-1,105</b>
<b>Result from financial investments</b>					
Interest income	Note 7	1,125	500	1,121	499
Interest expenses		-200	-202	-197	-202
<b>Profit after financial items</b>		<b>2,217</b>	<b>870</b>	<b>2,047</b>	<b>-808</b>
Appropriations	Note 8	476	1,323		
Tax on profit for year	Note 9	-754	-464	-830	-362
<b>NET PROFIT</b>		<b>1,463</b>	<b>406</b>	<b>1,693</b>	<b>153</b>

## CASH FLOW STATEMENT (figures in SEK thousand)

	Group		Parent company	
	2007	2006	2007	2006
<b>Operating activities</b>				
Profit after financial items	2,217	870	2,047	-808
Adjustment for items not included in the cash flow	2,744	5,922	2,795	5,808
Income tax paid	-124	-498	-160	-386
<b>Cash flow from operating activities before changes in working capital</b>	<b>4,837</b>	<b>6,294</b>	<b>4,682</b>	<b>4,614</b>
<b>Cash flow from changes in working capital</b>				
Increase/decrease in receivables	-6,026	-70	-6,265	-205
Increase/decrease in accounts payable – trade	3,136	2,556	3,106	2,556
Increase/decrease in other liabilities	1,692	-325	1,692	-323
Increase/decrease in advance payments for work in progress	-7,947	2,397	-7,786	4,066
<b>Cash flow from operating activities</b>	<b>-4,308</b>	<b>10,852</b>	<b>-4,571</b>	<b>10,708</b>
<i>Investment activities</i>				
Purchase of property, plant and equipment	-3,671	-3,538	-3,671	-3,538
Purchase of intangible fixed assets	-151	-468	-151	-468
Acquisition of shares and minority holdings	-60	-	-60	-
<b>Cash flow from investment activities</b>	<b>-3,882</b>	<b>-4,006</b>	<b>-3,882</b>	<b>-4,006</b>
<i>Financing activities</i>				
<b>Cash flow from financing activities</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Cash flow for the year</b>	<b>-8,190</b>	<b>6,846</b>	<b>-8,453</b>	<b>6,702</b>
<b>Cash and bank balances at beginning of year</b>	<b>25,506</b>	<b>18,717</b>	<b>25,245</b>	<b>18,547</b>
<b>Exchange rate difference in cash and cash equivalents</b>	<b>85</b>	<b>-57</b>	<b>-11</b>	<b>-4</b>
<b>Cash and bank balances at end of year</b>	<b>17,401</b>	<b>25,506</b>	<b>16,781</b>	<b>25,245</b>

# BALANCE SHEET

BALANCE SHEET (figures in SEK thousand)

		Group		Parent company	
		2007	2006	2007	2006
<b>ASSETS</b>					
<b>FIXED ASSETS</b>					
<b>Intangible fixed assets</b>					
Capitalised expenditure for software development	Note 10	911	776	911	776
<b>Tangible assets</b>					
Fixtures and equipment	Note 11	14,193	14,187	14,135	14,117
<b>Financial assets</b>					
Shares and minority holdings	Note 12	45	45	686	626
<b>Total fixed assets</b>		<b>15,149</b>	<b>15,008</b>	<b>15,732</b>	<b>15,519</b>
<b>CURRENT ASSETS</b>					
<b>Current receivables</b>					
Accounts receivable, trade		45,303	44,862	45,272	44,801
Receivables from group companies		15,886	10,134	16,122	10,134
Income taxes recoverable		635	1,265	600	1,270
Other receivables		78	245	51	245
Prepaid expenses and accrued income	Note 13	3,713	3,320	3,713	3,320
<b>Total current receivables</b>		<b>65,615</b>	<b>59,826</b>	<b>65,758</b>	<b>59,770</b>
<b>Cash and bank balances</b>		<b>17,401</b>	<b>25,506</b>	<b>16,781</b>	<b>25,245</b>
<b>Total current assets</b>		<b>83,016</b>	<b>85,332</b>	<b>82,539</b>	<b>85,015</b>
<b>TOTAL ASSETS</b>		<b>98,165</b>	<b>100,340</b>	<b>98,271</b>	<b>100,534</b>
<b>EQUITY AND LIABILITIES</b>					
<b>Equity</b>					
	Note 14				
Restricted equity					
Share capital (7,000 shares)		7,000	7,000	7,000	7,000
Restricted reserves		15,167	15,394	1,400	1,400
<b>Total restricted equity</b>		<b>22,167</b>	<b>22,394</b>	<b>8,400</b>	<b>8,400</b>
Non-restricted equity					
Non-restricted reserves		18,054	17,397	18,001	17,848
Profit for year		1,463	406	1,693	153
<b>Total non-restricted equity</b>		<b>19,517</b>	<b>17,803</b>	<b>19,694</b>	<b>18,001</b>
<b>Total equity</b>		<b>41,684</b>	<b>40,197</b>	<b>28,094</b>	<b>26,401</b>
<b>Provisions</b>	Note 15	<b>5,353</b>	<b>5,440</b>	-	-
<b>Untaxed reserves</b>	Note 8			<b>5,556</b>	<b>6,032</b>
<b>Current liabilities</b>					
Advance payments for work in progress	Note 2	18,040	25,987	31,599	39,385
Accounts payable, trade		12,299	9,163	12,269	9,163
Other liabilities		11,372	9,680	11,372	9,680
Accrued expenses and deferred income	Note 16	9,417	9,873	9,381	9,873
<b>Total current liabilities</b>		<b>51,128</b>	<b>54,703</b>	<b>64,621</b>	<b>68,101</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>98,165</b>	<b>100,340</b>	<b>98,271</b>	<b>100,534</b>
<b>MEMORANDUM ITEMS</b>					
Pledged assets	Note 17	5,000	5,000	5,000	5,000
Contingent liabilities	Note 17	3,985	3,548	3,985	3,548

## Comments and notes to the accounts

### Parent company and ownership structure

IVL is a wholly-owned subsidiary of the Foundation of the Swedish Environmental Research Institute (SIVL), corporate identity number 802006-2611, whose head office is located in Stockholm. On conversion of the former Swedish Institute for Water and Air Pollution Research (IVL) into a limited company in 1982, the original share capital was allocated in equal proportions to the foundation by agreement between the Swedish government and business sector. The aim of the foundation is to promote the long-term conditions required for environmental research and, through its ownership, guarantee the independent standing of IVL. The foundation is responsible for the funds allocated jointly by the Swedish government and business sector for environmental research carried out by IVL. The foundation is managed by a board of directors, half of whose members are appointed by the Swedish government and half by Swedish business. The chairman of the board is appointed by the government.

### Financing

The activities of the company are financed by current cash flow and by an unused bank overdraft facility of SEK5 million.

### Current tax case

In the current tax hearing regarding the VAT issue, the County Administrative Court found in favour of the Swedish National Tax Board (SKV) in a judgement issued on 27 June 2007. In the judgement of the court, which concurred in all essentials with the case made by SKV, the company is not entitled to recover value-added tax paid on costs incurred as part of grant-aided activities.

In the event that SKV's case is upheld on appeal, the position would be the following: In purely general terms, the payment of project grants of specific amounts to IVL by public agencies or the business sector would have a cumulative impact on earnings since IVL would be unable to recover value-added tax paid on the related expenditure. In terms of the annual cost to IVL, the sums involved would be considerable.

The case now goes to the Administrative Court of Appeal. The company, unlike the Tax Board, maintains that there shall be no restriction on the recovery of VAT charged on grant-aided expenditure. Although legal practice in this area is neither clear nor unambiguous, there is, in the opinion of the board, much to suggest that the Administrative Court of Appeal will allow the company's appeal.

The board has opted not to set aside the amount in this year's annual accounts.

## Accounting principles

### Accounting and valuation principles

The accounts comply with the provisions of the Swedish Annual Accounts Acts, the general rules of the Swedish Accounting Standards Board and applicable recommendations of the Swedish Financial Accounting Standards Council. The accounting principles are unchanged from the previous year.

### Consolidated accounts

The consolidated accounts have been prepared in accordance with Recommendation RR 14, Joint Ventures, of the Swedish Financial Accounting Standards Council. Consolidation of the associated company, Sino-Swedish (Tianjin) Environmental Technology Development Co. Ltd. and of Basta Online AB, in which IVL has a 60% holding, has been carried out using the proportional method.

The annual accounts of the associated company have been converted using the current method, which means that the balance sheet assets and liabilities have been converted at closing day rates. The income statement has been converted at the average rate for the year. Conversion differences do not affect the consolidated accounts, but are allocated directly to equity.

The untaxed reserves shown in the consolidated accounts are divided into restricted equity, equivalent to 72% of the Group's untaxed reserves, and deferred tax liability, equivalent to 28% of untaxed reserves. In the consolidated accounts, the tax reserve component of uninvoiced research and consultancy assignments has been allocated in similar manner to equity and deferred tax (in accordance with the accounting principle described under 'Work in progress' below).

### Associated companies

Associated company shareholdings are not reported in the consolidated accounts in view of their relatively modest levels (also see Note 11).

### Work in progress, parent company

Work in progress is defined as uninvoiced research and consultancy services carried out on a current-account or a fixed-price basis.

Under Swedish taxation law, fixed-price contracts shall be valued at the lower of the accrued direct and indirect costs, less any advance payments received from clients, providing scope for the creation of a reserve in respect of work in progress.

Fixed-price work in progress is valued at the lower of the production cost and invoicing value. The production cost has been calculated using a prudent valuation; in other words, applying a value above the lowest permissible fiscal value and below the highest value in accordance with good accounting practice.

Work in progress on a current-account basis is valued at the invoicing value.

In grant-aided projects in which IVL is a contract partner with the research financier and disburses project funds to other project participants, the funds in question are not reported as sales, but are recorded directly under the balance sheet item of 'Advance payments for work in progress'. This means that the funds received and then disbursed to partners are reduced by an amount corresponding to invoicing and outlay costs. Since the new principle has applied since 1 January 2007, the figures for the comparison year of 2006 have been corrected by a total of SEK12.5 million in lower invoicing and outlay costs.

## Notes

### NOTE 1 NET SALES (figures in SEK thousand)

	Group		Parent company	
	2007	2006	2007	2006
Net sales are divided into:				
Invoiced fees and analyses	150,053	150,821	149,839	150,722
Invoiced expenses	12,508	24,349	12,508	24,349
<b>Total net sales</b>	<b>162,561</b>	<b>175,170</b>	<b>162,347</b>	<b>175,071</b>

Of the net sales for the year, 21.14 % (21.36%) consists of amounts invoiced to the parent company, mainly as remuneration for jointly-financed research performed by the company on an assignment basis.

### NOTE 2 ADVANCE PAYMENTS FOR WORK IN PROGRESS

(figures in SEK thousand)

	Group		Parent company	
	2007	2006	2007	2006
Assignment costs	376,760	348,384	363,201	334,986
Invoiced in advance	-394,800	-374,371	-394,800	-374,371
Book value	18,040	25,987	31,599	39,385
<b>Change reported in income statement</b>	<b>6,368</b>	<b>-</b>	<b>6,207</b>	<b>-</b>
<b>Change for current projects reported directly in balance statement</b>	<b>1,579</b>	<b>-</b>	<b>1,579</b>	<b>-</b>
<b>Total change for year in advance payments for work in progress</b>	<b>7,947</b>	<b>-2,397</b>	<b>7,786</b>	<b>-4,066</b>

### NOTE 3 OTHER OPERATING INCOME (figures in SEK thousand)

	Group	Parent company
	2007	2006
Other	613	508
<b>Total other income</b>	<b>613</b>	<b>508</b>

### NOTE 4 OTHER EXTERNAL COSTS (figures in SEK thousand)

#### Group and Parent company

The item includes audit fees of SEK347 (306) thousand and SEK48 (50) thousand paid to BDO Nordic Stockholm AB and Deloitte & Touche respectively.

#### Leasing charges

Charges for financial leasing agreements in 2007 amounted to SEK13,290 (12,136) thousand. The charges shown include rental contracts for premises, company cars, computers and certain office equipment. Leasing charges for these agreements in future years are allocated as follows:

	2008	2009	2010	2011	2012
Leasing charges, other	1,314	761	-		
Premises	10,963	10,963	10,963	10,963	10,963
<b>Total</b>	<b>12,277</b>	<b>11,724</b>	<b>10,963</b>	<b>10,963</b>	<b>10,963</b>

### NOTE 5 PERSONNEL COSTS

Salaries and other remuneration (figures in SEK thousand)

Parent company	2007		2006	
	Salaries and other remuneration	Payroll overheads (of which pension costs)	Salaries and other remuneration	Payroll overheads (of which pension costs)
Board and MD	1,590	2,174	1,525	1,556
		(1,419)		(940)
Other personnel	59,047	30,533	57,086	30,267
		(8,913)		(9,252)
<b>Total</b>	<b>60,637</b>	<b>32,707</b>	<b>58,611</b>	<b>31,823</b>
		<b>(10,332)</b>		<b>(10,192)</b>

#### Group

The group also pays the salary of the managing director of the joint-venture company, amounting to SEK65 (60) thousand. No other salaries were paid to full-time employees of this company.

#### Average number of employees\* for year

Parent company	2007			2006		
	Men	Women	Total	Men	Women	Total
Stockholm	54	35	89	55	38	93
Göteborg	29	40	69	31	40	71
<b>Total</b>	<b>83</b>	<b>75</b>	<b>158</b>	<b>86</b>	<b>78</b>	<b>164</b>

\* defined as full-time, salaried employees

#### Group

The Group has 1 (1) additional employee.

#### Management

##### Parent company

In accordance with the decision of Annual General Meeting, a total of SEK322 (SEK327 thousand) was paid in fees to members of the board. Of this amount, the chairman of the board received SEK55 (55) thousand. The company has concluded a pension entitlement and severance pay agreement with the managing director.

The employment of the managing director of the parent company is subject to a period of notice of two years. This position carries a pension equivalent to 35% of salary, including benefits. Under an agreement concluded in 2006, the managing director will receive a pension from the age of 62, and a direct pension of 70% of current salary between the ages of 62 and 65, in addition to 35% of current salary until the age of 65.

##### Group

The managing director of the joint venture company is employed on a full-time basis for one year from 1 April 2007. The position is not pensionable.

**NOTE 6 DEPRECIATION OF TANGIBLE FIXED ASSETS AND CAPITALISED EXPENDITURE FOR SOFTWARE DEVELOPMENT****Group and Parent company**

Depreciation according to plan of fixtures and equipment is applied annually at a rate of 10% to 20% of the acquisition value, from the date of acquisition by the parent company during the year.

Depreciation according to plan of fixtures and equipment is applied on the basis of the remaining economic life of the asset, in accordance with a valuation developed for the international joint venture.

Depreciation according to plan of capitalised expenditure for software development is applied annually at a rate of 20% of the acquisition value from the date of completion during the year.

**NOTE 7 INTEREST INCOME AND EXPENSES****Group and Parent company**

The item includes bank interest income of SEK1,111 (488) thousand. SEK132 (65) thousand of the interest expenses of the parent company relates to Group companies.

**NOTE 8 APPROPRIATIONS AND UNTAXED RESERVES**

(figures in SEK thousand)

**Parent company**

	2007	2006
<b>Opening untaxed reserves</b>	6,032	7,355
Accumulated depreciation above/below plan	1,019	-133
Change in tax allocation reserve	-1,495	-1,190
<b>Total appropriations</b>	-476	-1,232
<b>Closing untaxed reserves</b>	<b>5,556</b>	<b>6,032</b>
<b>of which deferred tax at 28%</b>	<b>1,556</b>	<b>1,689</b>

**NOTE 9 TAX ON PROFIT FOR YEAR (figures in SEK thousand)**

	Group		Parent company	
	2007	2006	2007	2006
<b>Estimate of actual tax</b>				
<b>Profit before tax</b>	2,217	870	2,523	515
Additions:				
Non-deductible expenses			441	700
Tax from previous year			-	-2
Actual tax, international	12	5	-	-
Deferred tax	-88	97	-	-
Total tax	754	464	830	364
<b>Effective tax, %</b>	<b>34</b>	<b>53</b>	<b>33</b>	<b>71</b>

**NOTE 10 CAPITALISED EXPENDITURE ON SOFTWARE DEVELOPMENT (figures in SEK thousand)**

	Group		Parent company	
	2007	2006	2007	2006
<b>Opening acquisition value</b>	<b>776</b>	<b>308</b>	<b>776</b>	<b>308</b>
Software development cost for year	151	468	151	468
<b>Closing accumulated acquisition value</b>	<b>927</b>	<b>776</b>	<b>927</b>	<b>776</b>
Depreciation for year	-16	-	-16	-
<b>Closing residual value according to plan</b>	<b>911</b>	<b>776</b>	<b>911</b>	<b>776</b>

**NOTE 11 FIXTURES AND EQUIPMENT (figures in SEK thousand)**

	Group		Parent company	
	2007	2006	2007	2006
<b>Opening acquisition value</b>	<b>67,927</b>	<b>64,406</b>	<b>67,783</b>	<b>64,245</b>
Purchases for year	3,671	3,538	3,671	3,538
Exchange rate differential/scrapped equipment	-1	-17	-1	-
<b>Closing accumulated acquisition value</b>				
<b>Opening depreciation</b>	<b>71,597</b>	<b>67,927</b>	<b>71,453</b>	<b>67,783</b>
Exchange rate differential/scrapped equipment	-53,740	-48,903	-53,666	-48,836
Depreciation for year	-	-10	-	-
<b>Closing accumulated acquisition value</b>	<b>-3,664</b>	<b>-4,847</b>	<b>-3,652</b>	<b>-4,830</b>
<b>Closing accumulated depreciation</b>	<b>-57,404</b>	<b>-53,740</b>	<b>-57,318</b>	<b>-53,666</b>
<b>Closing residual value</b>	<b>14,193</b>	<b>14,187</b>	<b>14,135</b>	<b>14,117</b>

**NOTE 12 SHARES AND HOLDINGS**

Company	Group			Parent company	
	Number	Holding %	Booked	Quotient	Booked
Holding in IVL Swedish Environmental Research Institute foundation for staff training	1		5	5	5
United Competence Sweden Ltd.	400	20	40	40	40
Basta Online AB	600	60		60	60
Sino-Swedish (Tianjin) Environmental Technology Development Co. Ltd	1	50	-	581	581
<b>Total</b>			<b>45</b>	<b>686</b>	<b>686</b>

**Changes in book values for year**

Company	Group			Parent company	
	Number	Holding %	Booked	Nominal	Booked
Opening book value			45	626	626
Acquisitions					
Basta Online AB	400	60	-	60	60
<b>Closing book value</b>			<b>45</b>	<b>686</b>	<b>686</b>

**Associated companies**

United Competence Sweden Ltd., corporate identity number 556622-8663, is headquartered in Göteborg. With an equity of SEK240 (313) thousand, the company reported a loss of SEK-73 (-101) thousand in 2007. No sales or purchases were recorded.

**NOTE 13 PREPAID EXPENSES AND ACCRUED INCOME**

(figures in SEK thousand)

**Group and Parent company**

This item consists of prepaid rentals for offices and premises amounting to SEK2,792 (2,713) thousand, and other prepaid expenses amounting to SEK920 (607) thousand.

**NOTE 14 EQUITY** (figures in SEK thousand)

Group	Share capital	Statutory reserves	Non-restricted reserves	Profit/loss for year	Total
Opening balance	7,000	15,394	17,397	406	40,197
Appropriation per AGM			406	-406	0
Transfer between restricted and non-restricted equity		-227	227		0
Translation difference			-1		-1
Unconditional shareholders' contribution			25		25
<b>Profit/loss for year</b>				<b>1,463</b>	<b>1,463</b>
<b>Closing balance</b>	<b>7,000</b>	<b>15,167</b>	<b>18,054</b>	<b>1,463</b>	<b>41,684</b>
<b>Parent company</b>	<b>Share capital</b>	<b>Statutory reserves</b>	<b>Non-restricted reserves</b>	<b>Profit/loss for year</b>	<b>Total</b>
Opening balance	7,000	1,400	17,848	153	26,401
Appropriation per AGM			153	-153	0
<b>Profit/loss for year</b>				<b>1,693</b>	<b>1,693</b>
<b>Closing balance</b>	<b>7,000</b>	<b>1,400</b>	<b>18,001</b>	<b>1,693</b>	<b>28,094</b>

**NOTE 15 PROVISIONS** (figures in SEK thousand)**Group**

Provisions consist of a deferred income tax liability of SEK5,353 (5,440) thousand.

**NOTE 16 ACCRUED EXPENSES AND DEFERRED INCOME**

(figures in SEK thousand)

**Group and Parent company**

This item consists of:

	2007	2006
Holiday and overtime liabilities	4,728	4,128
Accrued payroll overheads	2,435	3,961
Other accrued expenses	2,218	1,784
	<b>9,381</b>	<b>9,873</b>

**NOTE 17 PLEDGED ASSETS AND CONTINGENT LIABILITIES**

(figures in SEK thousand)

**Group and Parent company**

	2007	2006
<b>Assets pledged to credit institutions</b>		
Floating charges	5,000	5,000
<b>Contingent liabilities</b>		
Pension commitment to MD	3,985	3,548

Stockholm, 20 February 2008



KJELL JANSSON  
Chairman of the Board



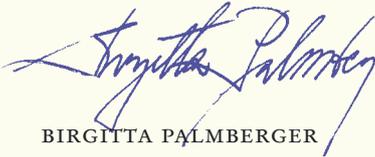
MARIE S. ARWIDSON



LARS-GÖRAN BERGQUIST



KERSTIN CEDERLÖF



BIRGITTA PALMBERGER



EDVARD SANDBERG



KURT PALMGREN



TORD SVEDBERG



ÅSA STENMARCK



CAMILLA HÅLLINDER EHRENCRONA



BJÖRN LUNDBERG  
Managing Director

My auditor's report was submitted on 14 April 2008.



Ulf H. Davéus  
Authorised Public Accountant

### Auditor's report

To the Annual General Meeting of IVL Swedish Environmental Research Institute Ltd.,  
Corporate identity number 556116-2446:

I have audited the annual accounts, group accounts and accounting records, and the administration of the board of the company, as well as the board of directors' and managing director's administration of IVL Swedish Environmental Research Institute Ltd. during the period 1 January 2007 to 31 December 2007. The board and managing director are responsible for the accounts and administration of the company, and for ensuring that the annual report and group accounts are prepared in compliance with the Swedish Annual Accounts Act. My responsibility is to express an opinion on the annual accounts, group accounts and administration of the company, based on my audit.

The audit was conducted in accordance with generally accepted auditing standards in Sweden. Those standards require that I plan and perform the audit to ensure, with high although not absolute certainty, that the annual accounts and group accounts are free of material inaccuracies. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the accounts. An audit also includes assessing the accounting principles used and their application by the board of directors and managing director, as well as their presentation of the annual report and group accounts. As a basis for my opinion concerning discharge from

liability, I examined significant decisions, actions taken and the circumstances of the company in order to determine the liability, if any, to the company of any board member or the managing director. I also examined whether any board member or the managing director has, in any other way, acted in contravention of the Swedish Companies Act, the Swedish Annual Accounts Act or the company's articles of association. I believe that my audit provides a reasonable basis for my opinions as set out below.

The annual accounts and group accounts have been prepared in accordance with the Swedish Annual Accounts Act, and thereby give a true and fair view of the company's and the Group's financial position, and the performance of operations in accordance with generally accepted accounting principles in Sweden. The directors' report is consistent with the other parts of the annual report.

I recommend that the Annual General Meeting confirm the income statements and balance sheets of the parent company and the Group, and allocate the profit in accordance with the proposal in the annual accounts, and that the members of the board of directors and the managing director be discharged from liability for the financial year.

Stockholm, 14 April 2008



Ulf H. Davéus  
Authorised Public Accountant

## Board



**Kjell Jansson**  
Chairman of the Board  
Board member since 1997.  
Director General,  
Statistics Sweden



**Marie S. Arwidson**  
Board member since 2004.  
Managing Director,  
Swedish Forest Industries  
Federation



**Lars-Göran Bergquist**  
Board member since 2000.  
Chariman of Swedish  
Environmental Research  
Institute (SIVL)



**Kerstin Cederlöf**  
Board member since 2004.  
Director, Swedish  
Environmental Protection  
Agency



**Birgitta Palmberger**  
Board member since  
2005. Department  
Mangager, the Swedish  
Energy Agency



**Edvard Sandberg**  
Board member  
since 2005.  
Director Swedenergy



**Kurt Palmgren**  
Board member since  
2003. Director



**Tord Svedberg**  
Board member since  
2005. Vice President,  
AstraZeneca



**Åsa Stenmarck**  
Board member  
since 2005.  
Staff representative



**Camilla Hällinder  
Ehrencrona**  
Board member since  
2005. Staff representative

## Deputy members

Lars Ekecrantz, Ministry of Sustainable Development  
Peter Nygårds, Senior vice President Swedbank  
Pererik Karlsson, Staff representative  
Tomas Viktor, Staff representative

## Management group

**Björn Lundberg**  
Managing Director

**Peringe Grennfelt**  
Research Director

**Eva Bingel**  
Head of Information

**Hans Lundberg**  
International Director

**Britt Björnsjüt**  
Head of Human Resources

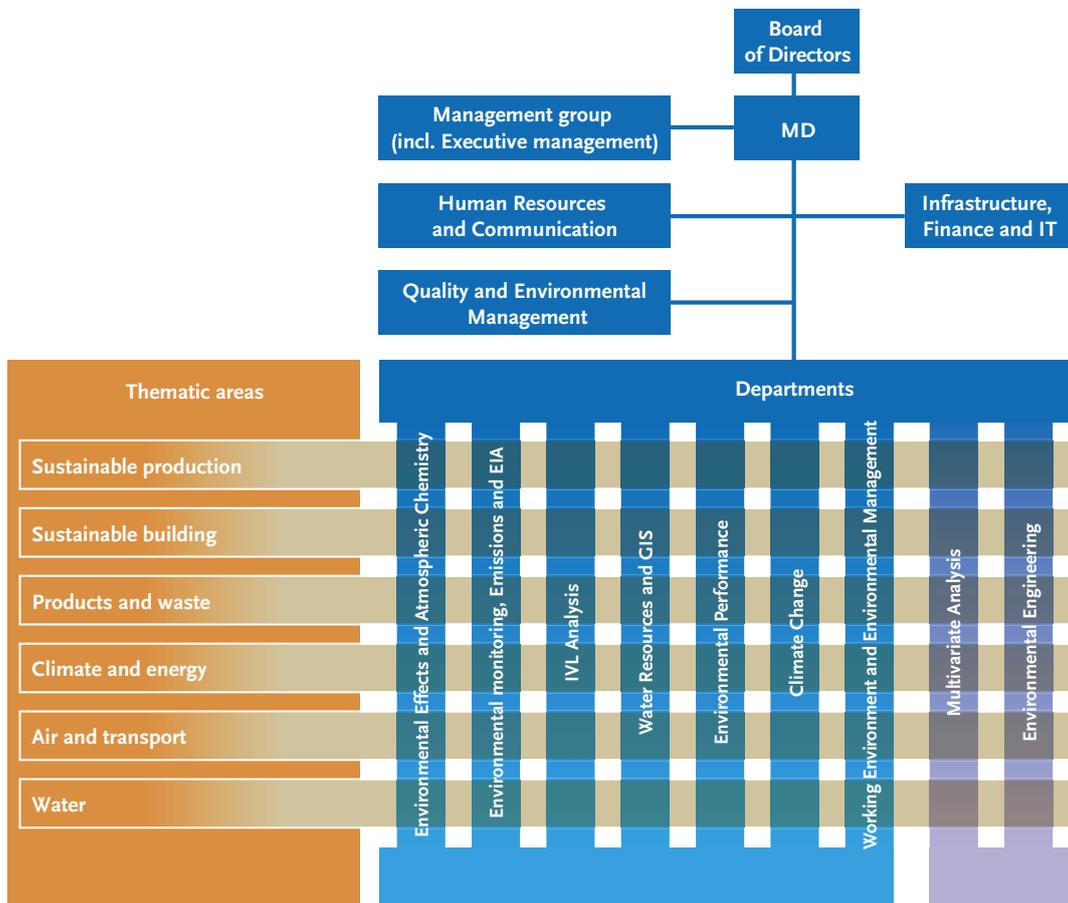
**Åke Iverfeldt**  
Vice Managing Director

**Lars-Gunnar Lindfors**  
Research Director

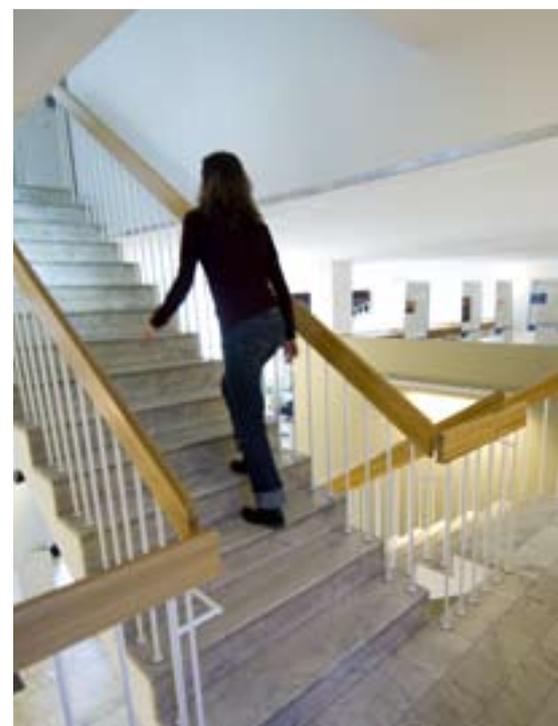
**Mats Ridner**  
Administration Director

**Östen Ekengren**  
Vice Managing Director

# IVL organisation







# **IVL** Swedish Environmental Research Institute

## **Stockholm**

P.O. Box 210 60  
SE-100 31 Stockholm  
Sweden  
Visiting address:  
Valhallavägen 81  
Phone: +46 8 598 563 00  
Fax: +46 8 598 563 90

## **SEC**

17 Fukang Road,  
Nankai District Tianjin,  
China 300191  
Phone: +86 22 23618286  
Fax: +86 22 23660372

## **Göteborg**

P.O. Box 5302  
SE-400 14 Göteborg  
Sweden  
Visiting address:  
Aschebergsgatan 44  
Phone: +46 31 725 62 00  
Fax: +46 31 725 62 90

*A Member of*

**United Competence**

P.O. Box 5401  
SE-402 29 Göteborg  
Sweden  
Phone: +46 31 335 56 00  
Fax: +46 31 83 37 82

## **Malmö**

Anckargripsgatan 3  
SE-211 19 Malmö  
Sweden  
Phone: +46 8 598 563 00  
Fax: +46 8 598 563 90

[www.ivl.se](http://www.ivl.se)