5 Concern for the environment

5.1. RSDB AND THE ENVIRONMENT

RSDB values the environment in all its aspects and has a professional Environmental Staff Department. RSDB is not obliged to publish a report, but as a major player in the Netherlands and Europe, the group does feel a moral obligation to do so. The intention is to let people see what we're doing, where we are and where we want to go.

As you may have read earlier in this report, RSDB has clustered its activities in two business lines: Print Productions and Marketing Communications. The main focus of environmental care at RSDB comes from Print Productions since this business line comprises the printing plants and thus those businesses where the environmental aspects are most acute.

RSDB had five web printing plants in the Netherlands: Roto Smeets Deventer and Roto Smeets Etten are rotogravure plants, while Roto Smeets Weert, Roto Smeets Utrecht and Senefelder Misset are web offset plants. Besides these, RSDB has two sheet-fed offset plants, Roto Smeets GrafiServices Eindhoven and Roto Smeets GrafiServices Utrecht. There is one web printing plant abroad, Antok in Hungary, in which RSDB owns an 85% share.

WEB PRINTING PLANTS

In a web printing plant the paper runs off a roll onto the press. The paper web is impressed with ink as it passes over cylinders holding the printing formes. The web plants serve the national and international markets for mail order catalogues, retail printing, directories, sponsored and commercial magazines. Roughly one third of all print produced goes abroad, to the UK, USA, Belgium, Sweden, Germany, Denmark, and France. Sheet-fed offset plants, where individual sheets of paper are inked on the press, usually print for the regional and national business market.

Prepress activities precede the printing: text and images have to be made up into pages and the press formes must be prepared. After printing comes the finishing process: finishing the printed matter by cutting it to size, folding it, gluing, etc., followed by dispatch.

The bulk of the raw materials input to all printing plants is made up of paper, ink and energy. The offset plants also purchase aluminium plates for the preparation of printing formes. The process also requires a variety of ancillary chemicals, including cleaning materials, and other aids, such as stitching wire, adhesives and packaging.

2006 AND BEYOND

As a group, RSDB's performance on a number of environmental indicators was better in 2006 than in 2005: emissions of volatile compounds, 'waste' (recyclable wastes and general), energy consumption and the use of process and ancillary materials per tonne of product.

RSDB keeps a keen eye on processes and technologies that may facilitate improvement of our environmental performance. An example is the introduction of a fully automatic dosing system, GMI, which provides for continuous photographic monitoring of the impression on the outcoming paper web, with continuous feedback to the ink dosing system. GIM has many advantages: the printed matter comes 'on colour' quicker, meaning less paper loss, dosing is continuously optimised, leading to lower consumption of ink and moistening water additives, with less waste due to rejected product. Other illustrations are initiatives in rotogravure in 2006. A new ink quality was put into production (high pigment inks – see p.64), while a number of presses have implemented concentration-dependent exhaust pumping, one benefit of which is a considerable energy saving.

Apart from possible new technological options, countless environmental aspects come down to continual efforts to perfect process management and control. While in the past 'environment' was more or less the exclusive objective, now attention has turned more to the processes themselves. It's a two-edged sword, after all, even in the environmental area: optimum control and efficiency in the printing process saves tremendously on cost, while reduced paper consumption, fewer press breakdowns and lower energy consumption are also pure environmental gains.

5.2.ENVIRONMENTAL POLICY, INSTRUMENTS AND MEASURES

5.2.1. RSDB ENVIRONMENTAL POLICY

Environmental policy statement

RSDB has set out its environmental policy in the RSDB Environmental Policy Statement (see page 68). The individual RSDB companies subscribe to this statement as being their own environmental policy. The statement marks out a concern for safety, health and welfare as an integral part of the group's business policy. Environmental policy is concerned with the prevention of pollution and the avoidance of nuisance to the surroundings. This concern also extends to the use of raw materials and energy.

RSDB regards an environmental management system, which must comply with current national and international demands, as an important means by which to manage its environmental policy.

RSDB is committed to a continuous effort to improve its environmental performance. The Ecobalance is an aid in charting this performance. Where possible, RSDB seeks to do more than it is legally obliged, insofar, of course, as voluntary measures bear a healthy relation to useful achievement and fit within profit targets. Priority is given to those measures that have a number of effects, not just environmental but also in other areas, such as safety, welfare, quality and efficiency.

Our striving for improvement also means that RSDB is actively involved in a search for less environmentally burdensome processes. RSDB also supports and encourages developments in the paper industry (a major supplier), to ensure that the paper purchased has the best possible environmental prior history. Sustainable forestry and a record of the origin of all fibre material are significant aspects in the selection of our paper suppliers. In terms of its own sales, RSDB seeks to severely limit or exclude any harmful effects from its products, packaging and services.

RSDB makes the necessary information available to all employees, encouraging participation in such training courses as may be required. Interested parties and others, both inside and outside the company, are kept informed about the degree of environmental burden and relevant developments.

Environmental policy agreement

The government has formulated the Netherlands' environmental policy in the National Environmental Policy Plan (NEP Plans 1 to 4). These plans set down the general goals for cutting environmental pollution. In its implementation of this policy, the government translates it in terms of groups of companies – a target group policy. In doing so, the general policy goals in the Plans are transformed into concrete targets and measures. A number of target groups have signed a covenant (an Environmental Policy Agreement) with the government. This was also the case with the KVGO (The Royal Association of Graphical Industries), of which RSDB is a member. RSDB has contributed to the drafting of this covenant for the graphics industry and participates actively in its further support. The current Environmental Policy Agreement runs from 1993 to 2010.

To give an impression of the range of agreements covered in the present covenant, they include: the use of certain cleansing materials and other volatile chemicals, reducing the percentage volume of isopropyl alcohol (IPA), measures related to hazardous waste, regulations for the storage of hazardous materials, and measures to restrict soil pollution. The first period, 1993–2000, gave positive results: the printing plants achieved their targets. The RSDB companies are now well on the way to fulfilling the agreements for the period 2000–2010, thus making this tranche successful, too.

In regard to the emission of volatile organic compounds (VOC), and in view of international climate agreements (Kyoto), the government has asked industry for an extra reduction of 35% before 2010. The graphics industry's agreement to achieve this target is still viewed by RSDB as realistic. In regard to toluene, for example, the RSDB companies that work with this compound are already well on their way. In order to achieve the VOC reduction targets, the percentage loss of toluene, for example, must remain at or below 5%. RSDB printing plants have already achieved this percentage.

Packaging

The Third Packaging Covenant ran through 2005. In it, the companies involved agreed to take measures to reduce the quantity of packaging waste that entered landfill or incinerators, with a concrete target for the datum year 2005. For paper and card the specific assignment was to achieve 75% re-use. This target has been met. As of 2006, the Third Packaging Covenant has been replaced by new regulations from the Environment Ministry (VROM). The Paper and Card Management Order [Besluit beheer verpakkingen papier en karton] makes businesses responsible for the prevention, collection and recycling of all the products they bring onto the market. The prevention side still requires greater effort and creativity. In general, it is a fact that the follow-up steps after the first reductions are increasingly difficult, but market demands also play a role. Customers make increasingly stringent demands on their end products, often involving sealing in plastic film so that CD ROMs, extra supplements or other products can be added. The requirements of the postal carriers are also involved: they demand bundling – and therefore packaging – of products according to the delivery route (e-sorting). This takes nothing from the fact that where packaging is concerned, RSDB companies are swimming against the tide, adopting such measures as materials selection to nullify the effects of such developments as far as possible.

International environmental policy

International environmental agreements, especially at European level, are increasingly coming to influence Dutch environmental policy. In recent years, European regulation has mainly been concerned to reduce acidification and cut air pollution (such as CO2 and fine particulates), sustainable business practices and hazardous (waste) materials policy.

An example is the IPCC (Integrated Pollution Prevention and Control guideline), which dates from 1996 and has since been integrated into the Dutch national Environmental Management Act. The authorities have to integrate this regulation within existing Environmental Management Act permits. In practice, what this means for businesses is that, before 30 October 2007, all existing installations must comply with the 'best available technology' criterion. RSDB plants are now all compliant.

Another example is new legislation on the storage of hazardous materials (PGS 15), which applies to existing printing plants if they change their business or rebuild. We also have the REACH guideline. Printers, as material end users, are closely monitoring what will be expected of them when this measure is implemented. The guideline obliges producers and importers to investigate the specific hazards posed by materials, to record the data, and to make them available to all users in the chain.

5.2.2. GOVERNMENT RELATIONS

Legislation and licences

Legislation, and the associated licences, involves RSDB companies in a very direct relationship with government. Each company must possess a licence under the Environmental Management Act (called a Wm Licence), for which local government is the relevant issuing authority. The Environmental Management Act regulates not just all matters related to the company and its immediate surroundings, but also, for example, the discharge of waste water to the sewage system. All licence requirements are checked annually by means of internal tours of inspection and a general inspection. The licence prescribes such matters as noise measurements, determining the emissions of certain chemicals to the air and sampling of rinse water that is discharged to the sewer from the prepress departments. A number of plants are obliged to measure and monitor the soil quality around storage tanks.

The plants are also legally obliged to have periodic inspections made of equipment such as steam boilers or cooling plant.

Some RSDB companies possess a license under the Surface Waters Pollution Act (WVO). They treat their waste water in their own plant, after which the water is discharged to the sewer.

Those plants that extract groundwater are licensed by the Provincial government.

Disaster management

If inspections show that permitted concentrations are being exceeded or under other irregular circumstances, the companies take immediate action to counter the cause. In all cases the licensing authority is also informed of the events and subsequent remedial actions.

All companies have prepared disaster plans in case a serious calamity should occur. The personnel are all instructed in these plans and internal company first-aid assistants are trained.

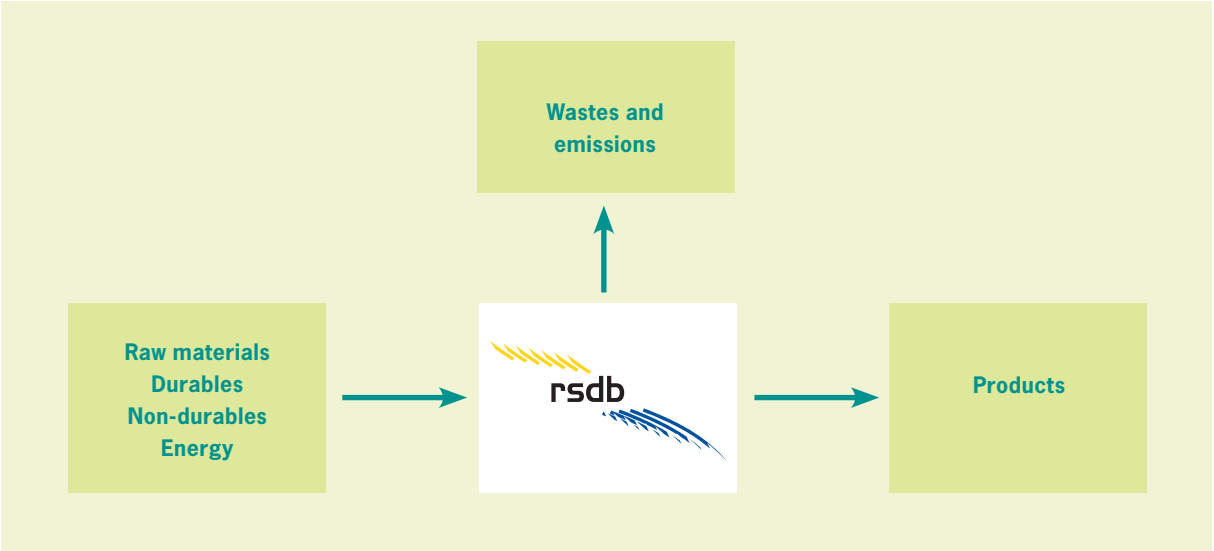
The environmental care system also requires a record to be made of near-environmental incidents, since they also provide an insight into the company's performance.

5.2.3. INSTRUMENTS AND ORGANISATION

Certain environmental developments are initiated and facilitated by the RSDB Environmental Staff Department. A number of group-wide ambitions have been formulated and major contracts have been signed, for waste removal among other things, on behalf of the associated companies. The RSDB companies, as associates within a single printing group, can also quite openly compare the solutions they have chosen and their environmental performance. This type of benchmarking helps to improve their performance. Externally, RSDB safeguards its own interests and those of the graphics industry in general. By participating in a variety of national and international discussions, RSDB can intervene in changing legislation and regulation at an early stage.

Ecobalance

The Ecobalance was introduced to all companies throughout the group in 1994. This is a mass balance of all incoming and outgoing material flows, plus energy and water. The data produced by RSDB are co-ordinated and validated by TME – the Institute for Applied Environmental Economics – which specialises in the economics and management of the environment and natural resources. The Ecobalance measures the streams in the individual RSDB plants and the group as



Principle of the eco balance sheet

a whole. It is not just a record. If performance is accurately captured in terms of numbers, it becomes possible to set precise goals with plans for action, the results of which can also be precisely measured. Because the Ecobalance reveals the companies' complete material budget, it can be used not only to manage emissions but also to help in the efficient management of raw materials and ancillary chemicals in the production process.

The data for the Ecobalance are collected continuously, so that a very frequent, up-to-date picture of performance can be generated, should that be needed to keep a running check on certain particular developments.

This complete mass balance gives the RSDB companies an environmental picture that goes far further than is prescribed under an environmental care system. The basic principles underlying the Ecobalance are shown in the diagram above.

Environmental care systems

RSDB regards its companies' internal environmental care systems as an important means for implementing its environmental policy. An environmental care system (environmental management system according to the revised Dutch National Standard NEN ISO 14001: 2004) forms a coherent unity of policy, organisational and administrative regulations by which the companies give form and content to their environmental management structure. It is precisely such systems that allow environmental management to be done systematically according to well-described, fixed procedures. Moreover, the system demands that the companies improve continuously, according to a cyclic process of goal setting, action, and evaluation, resulting in the setting of new goals.

The environmental care system is concerned with all environmentally-linked business activities. Among other things, it sets down operating procedures related to environmentally-conscious purchasing, the selection of suppliers and processors in the chain, working with minimum stock levels, methods for storing and labelling process materials, good housekeeping (the correct use of materials), and neatness on the shop floor (tidying mess, separating waste according to procedures). Other elements of the environmental care system relate to getting the workers more involved, environmental training, and communicating about the environment, both internally and externally.

ISO 14001: 2004 also calls for attention to environmental aspects that can be indirectly influenced, such as the origin of wood used for papermaking, the way waste is treated and the optimisation of recycling.

For environmental activities further on in the chain, such as suppliers, including waste processors, RSDB companies can call on the results of a thorough, central assessment of all suppliers. These data are incorporated in an extensive RSDB suppliers' assessment. These data are maintained in a suppliers' database, available on the RSDB environment site, which can be accessed via the group intranet by the individual companies. Besides supplier data, this site also contains other relevant environmental information (ink and paper, for example), environmental licences, the Ecobalance, all certificates, and all annual environmental reports.

RSDB companies set up their environmental care systems according to the international NEN-EN-ISO 14001: 2004 environmental standard and have them certified by an external auditor. Once certified, the care system is regularly re-audited to determine whether it still merits the certificate. Internal audit teams made up of the companies' own staff are also active, partly in view of the recurrent external audits, using an audit programme that checks all environmentally-related procedures and working documents at least once every three years.

Management and the works councils are periodically informed on environmental affairs. An important aspect of the reporting involves the findings of internal and external audits. Besides employees who are directly involved with production, some supervisors also take their place in the internal audit teams.

In RSDB companies that also have an operational quality assurance system, the two audits are combined. Quality and the environment are in fact two sides of the same coin: perfect process management is the route to both excellent products and environmental benefit.

Company environmental plans and annual environmental plans

At the individual RSDB company level, concrete environmental policy is developed as company environmental plans and annual environmental plans. These plans are based on the Environmental Policy Agreement (see page 59). The company environmental plans, which contain measures for a number of years, are drafted in part for and after discussion with government. The plan gives the company an insight into its business processes and environmental impacts, the environmental standards with which the company must comply, and the tasks and targets of its environmental policy.

The annual environmental plans underlie the company environmental plans (sometimes as part of a combined plan covering Quality, Working Conditions and Environment), allowing the companies to set down their goals and tasks for the coming year and the concrete actions they intend to take. The execution of the plan is monitored throughout the year.

Environmental co-ordinator

Each web plant has its own environmental co-ordinator (sometimes in the form of a QWE – Quality, Working Conditions and Environment co-ordinator), who has an important internal advisory function which includes the drafting and establishment of procedures. Other functions include compliance with environmental legislation, monitoring this compliance, and maintaining the environmental care system. The co-ordinator also functions as a checkpoint for assessing the environmental safety of incoming materials. Another task is assessing the environmental aspects of suppliers of products and services. Besides that, time is devoted to conducting the checks and inspections of the various departments and guiding the internal audit teams. Checks and inspections are concerned with safety, neatness and orderliness, conducting improvement campaigns and recording their results. The co-ordinator also monitors the progress of projects conducted under the annual environmental plan.

The size of the two sheet-fed plants of Roto Smeets GrafiServices means that the environmental co-ordinator function there is performed by the company manager.

Within RSDB as a whole there is a general, wide-ranging, quarterly environmental co-ordinator meeting, at which all environmental co-ordinators from the various RSDB printing plants discuss developments, problems and their solutions in their own areas, exchanging knowledge and experience.

The environment is actually placed on the agenda of everyone in the group thanks to discussions in the departmental consultations. The individual companies have provided digital access to all relevant environmental information for all employees (see Environmental Care System, page 61).

Complaints management

Complaints are an indicator of the relations between the companies and their surroundings. They are also valuable signals for the improvement of company operations. The companies take pains to treat complaints seriously, the keywords being: recording, personal resolution and active follow-up. The procedure whereby environmental complaints arrive or are collected at a single point has been set down in writing. In practice, any complaints that are made to the local authority are usually passed straight on to the company, so that the company itself can respond as quickly as possible.

Training

Companies train employees as internal auditors. The internal audits under the environmental care system ensure that the system can successfully pass the external audit for recertification. In some cases, according to the specific situation in a given company, environmental training courses are bought in from outside. These included courses to make all personnel sensitive to environmental aspects, so that they too will be able to indicate points for improvement. ‘The Environment’ is thus steadily losing its status as ‘something extra’ as it becomes part of the regular training given, for example, to new printers when they enter employment with RSDB and is incorporated in standard operating procedures.

5.2.4. TARGETS, MEASURES AND PROGRESS IN 2006

RSDB as a whole

For RSDB as a whole, attention to the environment in 2006 can once again be summarised as striving for good process management. Apart from improving production performance, this has a variety of positive effects on the environmental

burden imposed by the production process, such as paper losses, ink usage, or the emissions of volatile compounds from the moistening water additives that improve the interplay of water, ink and printing plate.

It has been RSDB policy for years that all printing plants must have a certified environmental care system. To retain their certification they have to undergo regular, successful environmental audits. External and comparable internal audits were thus again a major topic in RSDB companies in 2006.

In 2006 RSDB had all printing plants FSC certified. Customers who wish to show their commitment to the environment by means of their printed communications can now have the logo printed at all RSDB plants. The FSC Chain of Custody (CoC) system forms a link between responsible forest management and the consumer. The primary goal of the CoC certification is to offer the assurance that FSC certified material is followed throughout the production chain. In this way the consumer / end user may choose FSC certified products in the knowledge that the material's origin has been verified.

Other

Besides the group-wide ambition, more company-specific targets and measures held at local level, are described in the companies' annual environmental plans for the reporting year. These include, for example, research and where necessary action under the ATEX guideline (explosion hazard) and the PGS 15 standard (storage of hazardous materials), fire safety activities, updating the environmental handbook, optimising the water treatment plant, concentration-dependent air exhaustion on the presses, or research into the second use of 'grey' water from the surroundings as industrial water and feed water for secondary plant.

5.3. RSDB ENVIRONMENTAL INFORMATION

5.3.1. INPUT–OUTPUT

The environmental data presented here relate to consumption of energy and water, usage of process materials, wastes (solid wastes, waste water, emissions), and possible nuisance to the surroundings. All in so far as they are directly related to the activities of RSDB companies. Indirect environmental aspects also play a role, of course, such as the production of the chemicals that RSDB purchases or the further treatment of company waste. The environmental burden produced elsewhere in the chain forms no part of the Ecobalance (see page 61) and has not been incorporated in the data presented on the following pages. This does not mean, however, that RSDB's concern starts only upon purchase and stops after the waste leaves the plant. RSDB is actively concerned with other parts of the chain, making its requirements clear both to suppliers and waste processors. Such care is also an element of the ISO 14001: 2004 environmental care system

On the following pages we present first RSDB's 'output' data, in terms of waste water, atmospheric emissions and waste, as well as on nuisance and environmental incidents. These are followed by data on the consumption of energy, water and other materials on the 'input' side.

The figures come from the RSDB Ecobalance, which is derived from a careful record of all inflows and outflows. It should be noted, however, that not all flows are easy to weigh. The release of volatile compounds from certain formulations, for instance, has to be assessed from a given percentage evaporation. In such cases we have to rely on theoretical and empirical knowledge, verified as far as possible by tests and measurements made on the shop floor.

The data relate to the RSDB companies in the Netherlands. The performance of the printing plant in Hungary (85% owned by RSDB) – a company that has completely fulfilled all Hungarian environmental standards since new construction in 2002 – will be incorporated in the Ecobalance as soon as it becomes wholly owned by RSDB.

The presentation shows the 2006 data in every case accompanied by data from previous years. The graphs display annual figures from 2002 on. Data for different years, however, cannot be simply compared. Changes of production volume naturally influence both input and output. For that reason, all data have been recalculated in terms of quantities per tonne of product (indexing).

The index figures are also influenced by the order profile (number of colour changes, paper formats, etc.). It was not uncommon, for instance, to use thinner paper in 2006. Every tonne weight of paper that goes through the plant thus represents a far greater printed area, so the environmental performance per tonne of product then threatens to change accordingly. For this reason, RSDB has studied the question of whether future performance should be related to the area of paper printed. It turns out, though, that it is impossible to compute productivity in square meters, especially for the offset plants. Performance is thus for the time being still based on tonnes of product.

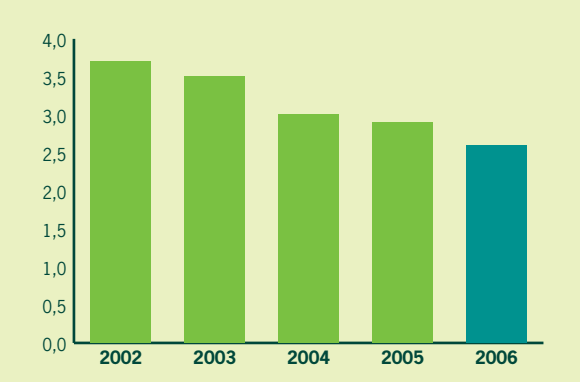
5.3.2. EMISSIONS TO WATER

The cooling water used in RSDB plants does not come into contact with the production process and thus remains free of the compounds used in the process. Rainwater that flows into the sewer from buildings and paved areas is in principle relatively clean. Most important is the water polluted from housekeeping and process operations in the RSDB plants.

The plants have equipment that allows them to comply with the terms of their licences as regards waste water quality. In 2006, one plant had virtually completed the research required under a new permit, and has initiated a new approach to bring the toluene content of waste water down to zero. Another plant is in consultation with the water authority on discharge standards, in particular the chloride content of the discharge water. The 'salt content' has increased, in fact, due to lower water consumption and less discharge of company waste water, while salt use has increased to assist water treatment. This implies an increase of chloride in the waste water. Apart from possible unusual circumstances, waste water in all plants receives attention as part of our continuous efforts to improve the production process.

5.3.3. EMISSIONS TO AIR

RSDB's emissions of VOC to air (kg/tonne product), 2002–2006



Roughly 20% (in 2006) of the total quantity of VOC (Volatile Organic Compound) emissions to air consists of isopropyl alcohol (IPA). Other VOC emissions relate to volatiles from other moistening water additives, cleansers, and toluene from printing ink, together making up approximately 69% (2006) of the total mass of VOC.

The trend of previous years has continued in 2006 as VOC emissions per tonne of product declined yet again.

In the offset plants, IPA and other moistening water additives account for approximately 88% (2006) of all VOC emissions. The measures taken to reduce IPA consumption in the offset plants led in the late 1990s to early 2000s to roughly a halving of the emission of this compound per tonne of product in the offset plants. Some presses (more of them in 2006) are currently printing alcohol-free. Where this is not possible (both the press and the product type must be suitable), in recent years we have been exploring the lower dosage limit.

In RSDB's offset plants the use of IPA per tonne of product declined by about 4,5% below the 2005 level, despite the fact that plate quality forced one plant to increase IPA dosage slightly once again, and despite the fact that more wood-containing paper was used in 2006. This paper type, typical of the retail sector, absorbs more moistening water.

In the rotogravure plants, combined toluene emissions in 2006 were cut by 13% per tonne of product. The plants worked with more highly pigmented inks, involving less toluene use (plus reduced water and energy consumption as less toluene has to be extracted from exhaust air). The investment in concentration-dependent air exhausting round the press also led to higher toluene recovery yields. Finally, the order profile also has an influence: one of the rotogravure plants was able to do more production runs on a wide press, which has a higher toluene recovery yield.

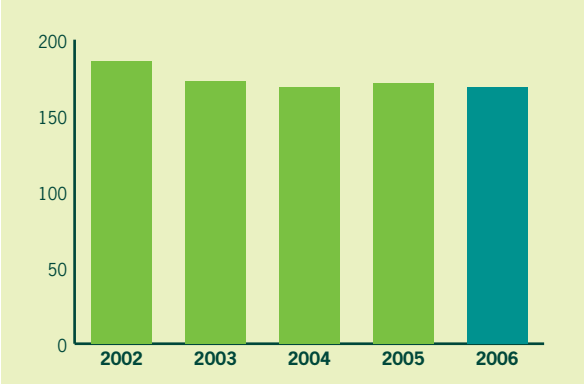
Finished product emissions

Once the printed matter is finally ready, it can still give rise to minor VOC emissions. The rotogravure ink still contains toluene that is gradually released. This occurs first of all in the plant, where the work stands ready for dispatch, during transport or even further down the line. Within RSDB this emission is being dealt with by modifying the ink formulas to influence the moment of toluene release, so that it is freed during the production process, where it can be captured, or by passing the printed matter through an autoclave, which is a closed space under greatly reduced pressure, which forces toluene to release from the printed paper. This extra stage gives re-usable toluene and prevents its 'disappearance' down the line. In this way the toluene content of the printed paper meets the stringent requirements that some (especially the Scandinavian countries) demand.

5.3.4. WASTES

RSDB wastes (in kg/tonne product) 2002–2006

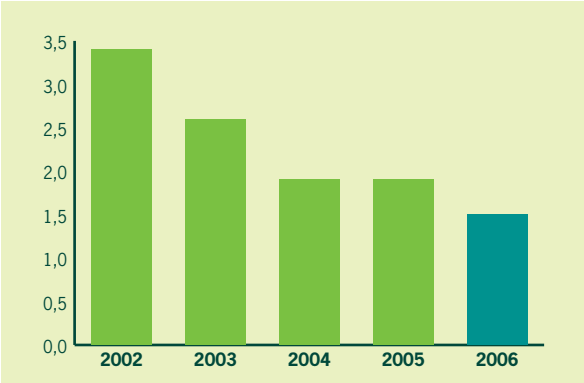
Recyclable waste materials



Recyclable wastes comprise mainly paper and card.

The quantity of recyclable waste per tonne of product was lower in 2006 than 2005. Efforts to separate waste – by, for instance, keeping bundle banding out of the 'general plant waste' stream and recycling it – may well cause this quantity to increase, but paper loss presents a serious factor. Paper waste also received attention in 2006, in the form of even closer monitoring of the correct number of copies printed.

General process waste



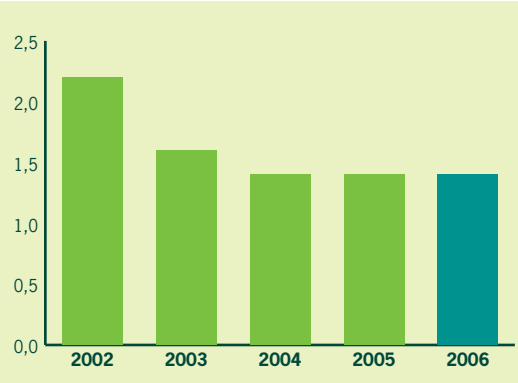
The quantity of general process waste per tonne of product declined below the 2005 level.
The process waste figure will always be subject to swings that are independent of any measures taken to reduce it. It would have been a very different picture if 2006 had been a year with relatively few 'unusual' activities, such as demolition work, rebuilding and tidying campaigns. Permanent improvements are being sought by concentrating as much as possible on waste separation and recycling.

Environmental burden?

The data on RSDB's waste streams and emissions do not in every case represent the actual burden to the environment. 'Hazardous waste', for example, is obviously not introduced into the environment but is carried away for processing. The waste water, too, that the plants discharge to the environment also undergoes final treatment in the sewage operator's plants. Nevertheless, RSDB's self-assessment takes full account of the quantities of these wastes produced in its output streams, regardless of the quantities produced. The Ecobalance does include a separate category for 'recyclable wastes' since these do not actually enter the waste stream but are re-used as raw materials.

Despite this caveat, as well as the accents laid on us by government (such as VOC emissions), the entire mass balance is important for RSDB, in terms of its significance for our active concern for the environment and an efficient usage of materials and energy throughout all segments of the company.

Hazardous waste



The quantity of hazardous waste per tonne of product in 2006 was comparable to the 2005 level. As with process waste, this figure is partly determined by unusual occurrences. For example, as against a significant decrease in the quantity of cleaning cloths and water / detergent disposed of at one

plant, there was an increase at another, where a batch of unusable ink was disposed of, while more hazardous waste was produced from extra maintenance on one of the presses. Finally, it should be noted that hazardous waste is being defined with increasing precision. A positive trend like this, keeping more materials out of the general process waste stream, may well result in an increase of hazardous wastes.

5.3.5. ENVIRONMENTAL INCIDENTS, NUISANCE

Minor incidents were recorded in various plants in 2006, such as minor near-fires.

In 2006 RSDB plants received a total of two complaints, while three environmental incidents were registered.

One of the complaints related to a report from a waste processor that the wood container's contents were polluted. The attention of the employees involved was drawn to agreements on monitoring and control. The second complaint related to noise nuisance, which turned out to be caused by a ventilator in an afterburner. A plan was drafted to screen this noise source off completely in 2007.

One of the environmental incidents in 2006 related to contractor negligence. Without informing RSDB, they had not covered the soil during a treatment operation. In a second case, three barrels with unknown content and as yet unknown origin were found in an area. They were carried off in a responsible manner. A third case concerned pollution by hexavalent chromium on the roof. A plant emergency plan immediately went into effect, production was stopped in the chromium bath from which air was being exhausted, and the sewer to which the roof discharged was sealed off. The appropriate authorities were informed and an investigation was started to trace the origin. The cause was found and removed, followed by thorough cleaning of both plant and roof.

5.3.6. SOIL QUALITY

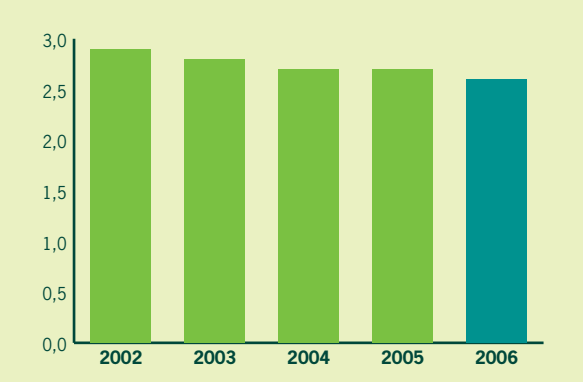
To protect the soil from pollution, the plants conduct regular inspections covering such matters as the liquid sealing of floors and the state of underground tanks. They also safeguard soil quality by monitoring it at strategic points.

There is pre-existing soil pollution at two plants. In one case (RS Etten) preparations have been started for a clean-up operation planned to start in 2009: agreements on the division of costs between government and company and research, combined with several pilot trials, to gain a better insight into the boundaries of the pollution and the expected effects of the intended clean-up methods.

At a second plant, RS Deventer, a clean up operation that had been going on for some time was completed in 2006, related to an historical case of surface water pollution. In 2006, too, another, limited amount of soil pollution was also cleaned up in 2006. Groundwater quality is currently being monitored at both locations in Deventer.

5.3.7. CONSUMPTION DATA

RSDB's energy consumption (Gigajoule/tonne product) 2002–2006



The energy consumption figure includes all energy consumed: electricity, gas and district heating. After two years of nearly constant consumption, a slight decline can once again be seen.

Consumption continues to command RSDB's attention (consumption analysis, attention during investment decisions, rebuilding, etc.). Thorough investigation of the energy budget in 2006 revealed that a steam boiler at one plant could be closed down immediately as the boiler configuration turned out to be over generous. An investment in concentration-dependent air exhaustion round the press (exhauster speed depending on toluene concentration) at one rotogravure plant in 2006 led to reduced energy consumption in ventilators and the toluene recovery unit. A number of feasibility studies were conducted in 2006 with an eye to future improvements, such as the recovery of waste heat from afterburners, combined heat and power plants, replacing compressors and changing the type of lighting.

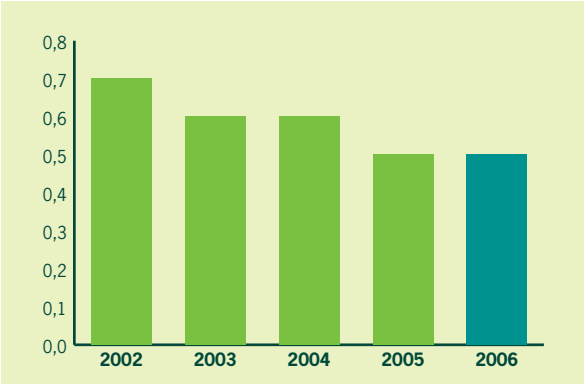
As against these favourable developments, there are unfavourable ones, too, such as the operation of a faster

press, with higher energy consumption, or the installation of an afterburner that is less sensitive to breakdowns but does consume more energy.

The index figure, finally, is also sensitive to external factors, such as printing on thinner paper, which means a larger number of press rotations (machine hours) per unit mass of paper emerging from the production process.

WATER

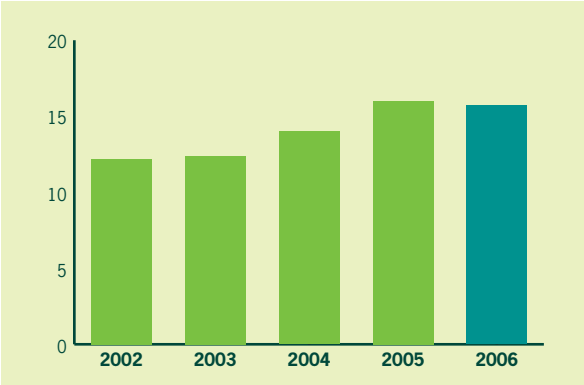
RSDB's water consumption (m3/tonne product) 2002–2006



Water consumption per tonne of product remained virtually constant in 2006. There were favourable and less favourable factors. Among the first, there was greater investment in air-cooled rather than water-cooled vacuum pumps, decommissioning steam boilers or improving their yield, and less water consumption in toluene recovery. The hot summer weather was a less favourable factor.

ANCILLARY AND PROCESS MATERIALS

RSDB's consumption of ancillary materials (kg/tonne product) 2002–2006

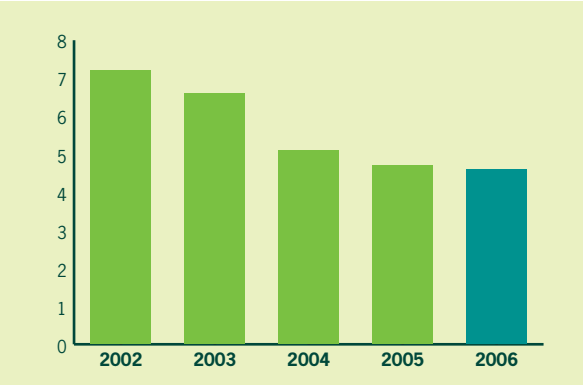


Besides raw materials – chiefly paper and ink, which RSDB has for years consumed at a rate of about 1.2 tonne/tonne product – the company distinguishes between ancillary and process materials.

Ancillary materials include such things as binding material, such as wire and glue, other adhesives and packaging, which make up more than 95% of the total weight of auxiliary materials used within RSDB. In 2006 the consumption of ancillary materials per tonne of product declined a little from 2005. This goes against the tide of rising demand for printed matter to be delivered packaged, including film wrapping, and the increase in the use of one-trip pallets as more was produced for export. RSDB does attempt to counter adverse trends, partly by using thinner film and improvements in the packaging line (such as automatic control and even more custom-tailored packaging). The plants are dependent on their customers' demands, but prefer to search together with them for savings options.

Process materials include chemicals (about 35% of the total mass), plates and the associated developer and fixer, cleaning cloths, cleansers and disposable packaging of products supplied to us. Process material consumption is strongly influenced 'from outside' as a result of the order package and order portfolio (colour use, colour changes, print run, paper types, etc.), since these determine the number of plates and the quantity of cleaning materials needed. While in this respect the order profile in a number of RSDB plants was against us, nevertheless, process material consumption per tonne of product declined in 2006 with respect to 2005. The RSDB plants remain committed to an aware, efficient use of process materials.

RSDB's consumption of process materials (kg/tonne product) 2002–2006



5.4. ENVIRONMENTAL POLICY STATEMENT

RSDB views environmental policy, just as much as a concern for safety, health and welfare, as an integral component of sound business policy. The group is also involved with society as a whole and has a responsibility to its employees, customers and the general public.

The group's environmental policy is concerned to prevent pollution of the air, water and soil and to limit nuisance from noise and other causes. The environmental effects of the use of raw materials and energy form a central theme within this policy.

The actual, effective implementation of this policy involves the use of an internal Environmental Care system that fulfils the following criteria:

- The system satisfies the requirements set down in the ISO 14001:2004 standard, including the related certification, to guarantee a satisfactory, responsible place for the environmental care system within the entire company's operation.
- The system is suited to the nature, size and environmental consequences of RSDB's activities.

This internal Environmental Care system has been set up to achieve the following objectives:

- Compliance with the provisions set down in environmental legislation and anticipation of new legislation, both national and European.
- Building up an adequate set of instruments at plant level to allow the total environmental burden to be controlled and limited.
- Suffusing the entire organisation with the need to limit as far as possible the adverse effects of business operations on the environment, especially in regard to emissions and waste streams. A major part of this endeavour is optimising the effective utilisation of raw materials and energy.
- Adequately informing those involved, both inside and outside the company, about the degree of environmental burden and the improvements achieved.

RSDB actively seeks less environmentally burdensome business processes.

RSDB is committed to a continuous effort to improve its environmental performance.

RSDB actively supports and encourages those developments in the paper industry that lead to the use of environmentally friendly raw materials and the re-use of waste paper.

RSDB monitors the environmental history of the paper it purchases. Important aspects in the selection of paper suppliers are sustainable timber extraction and a record of the origin of all fibre material. This guarantees that the timber is taken from sustainably managed forests.

RSDB actively seeks to eliminate or restrict as far as possible any adverse side-effects – whether related to the environment, health, or welfare – of its products, packaging or services.

Insofar as it lies within it ability, RSDB shall take pains to identify, limit and remediate such environmental damage (soil pollution) as may have been caused on its premises in the past.

Where possible RSDB shall do more than the law demands, but all voluntary measures must show a healthy balance between the effort made and the result achieved. Priority in this regard shall be given to those environmental measures that also impact other areas, such as safety, health and welfare, quality, and efficiency.

Internally, RSDB shall ensure that the necessary information is provided to all employees. The group shall also participate in, support and encourage the necessary training courses.

Our employees support the objectives set out above and are completely aware of their own responsibilities in this regard.

RSDB has operationalised an Ecobalance for the entire group. This instrument uses a mass balance to provide an insight into the environmental effects of all processes in the company. This annual balance provides a sound management basis to:

- establish and reveal the potential for improvement, and
- determine and implement improvement activities. It is therefore an excellent aid, revealing our continuous efforts to improve our environmental performance.