National Institute for Public Health
and the Environment
Ministry of Health, Welfare and Sport

RIVM Annual Report 2011

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Contents

Moving with the times

The National Institute for Public Health and the Environment (RIVM) has been in existence for over one hundred years. During its long history, it has developed to become a knowledge institute which enjoys a very high reputation, both nationally and internationally.
We owe that reputation to the quality of our work, and to the passion with which our staff perform the institute's public task. We wish to maintain our prominent position.
To do so, we must 'move with the times' and provide an appropriate response to various major social and societal developments. For example, scientific authority is no longer taken for granted. The public are extremely discerning when presented with knowledge and information, taking a critical view of both the content and the manner in which it is presented. Greater transparency is the key to success.
Similarly, the trend of individualisation within society continues unabated. Processes move more quickly: today's news is tomorrow's history. If we are to interact effectively with our target groups, we must make full use of modern communication channels such as the social media. We must also seek new partnerships and new connections, since the desire for collaboration is another important social development. Networking organisations and multidisciplinary cooperation are the order of the day.
Alongside these trends we face a changing economic context. The government must make carefully considered choices when establishing the public budgets for knowledge development, policy support and implementation. Those budgets will inevitably be more restrictive than in the past, whereupon we must use the resources made available to us as intelligently, effectively and efficiently as possible. This calls for innovation.
In short, the future will bring many opportunities and many challenges. In this Annual Report, however, we look back on the recent past, and on some of the activities and achievements of 2011. They include our part in the response to a major fire at the Chemie-Pack plant in Moerdijk and in controlling a potential outbreak of EHEC. We also consider our ongoing involvement in the National Vaccination Programme, the latest survey of the nation's diet, and the preparations for a population screening programme for colorectal cancer, which is to be launched in 2013.
I hope that you will find this report both interesting and informative. Meanwhile, we shall continue to prepare for the future so that we can perform our task with the customary verve and vigour. We do so in the service of the government, the professional field and society at large.

Prof. André van der Zande
Director-General, RIVM

Profile

The National Institute for Public Health and the Environment (RIVM) is a specialised Dutch government agency. RIVM is the premier expertise and orchestration centre in its field and its remit is to modernise, gather, generate and integrate knowledge and make it usable in the public domain. By performing these tasks RIVM contributes sustainably to promoting the health of the population and the environment by providing protection against health risks and environmental damage.

We serve the public interest by:

- acting with integrity, using specialised knowledge of health and the environment;
- identifying, evaluating and tackling risks together with our partners;
- sharing knowledge with national and international authorities;
- contributing to public health and environmental innovations.

RIVM
- develops, integrates and maintains knowledge and expertise in association with partners and learns from institutes and authorities in other countries and from the business community;
- conducts research aimed at supporting policy-making and overseeing public health and the environment;
- works on contract but remains scientifically independent;
- makes its knowledge available and usable for clients and other users in the Netherlands and other countries;
- performs statutory duties;
- identifies and reports trends in public health and the environment;
- acts with knowledge, resources and manpower during disasters;
- orchestrates prevention, intervention, after-care and knowledge;
- facilitates and coordinates networks of professionals and operational organisations;
- carries out temporary tasks that can subsequently be taken over by others.

Independent knowledge and research institute

The main commissioning bodies of RIVM are the Ministry of Health, Welfare and Sport, the Ministry of Economic Affairs, Agriculture and Innovation, the Ministry of Infrastructure and the Environment, and the Ministry of Social Affairs and Employment. The Institute also undertakes work for the Ministry of Defence and other ministries, departments and authorities, including inspectorates and international organisations like the European Union and the United Nations.
RIVM is committed to being a reliable partner for the authorities and professionals. However, our commissioning bodies have no influence over the arrangement and results of our work. The Institute has an independent scientific position regulated under the RIVM Act. Scientific independence is an absolute precondition for RIVM, both in the performance of its tasks and in its considerations on whether to enter into strategic knowledge alliances. RIVM guarantees that there will be no conflicts of interest. RIVM may provide to third parties the available knowledge and information independently of clients.
The Scientific Supervisory Committee monitors the scientific quality of the Institute. The Committee consists of a number of highly respected scientists. A summary of the annual report of the Scientific Supervisory Committee can be found on page 34.

Scientific integrity

RIVM regards full compliance with the principles of scientific integrity as essential. Those principles have been formalised by means of the RIVM Code of Conduct for Scientific Practice, which is based on the guidelines produced by the Association of Universities in the Netherlands (VSNU). The Code is linked to the organisation's Scientific Integrity Regulation, which sets out the procedures to be followed should there be any allegation of scientific malpractice. The Regulation establishes an important role for the Confidential Advisor on Scientific Integrity, a position currently held by Prof. W.P.M. (Wiel) Hoekstra, who assesses reported violations of the Code.
In late January 2012, RIVM adopted a further code of practice which guards against undue influence due to conflicting interests. This document was drawn up at the initiative of various prominent health and research institutes, including the Royal Netherlands Academy of Arts and Sciences (KNAW). Among its requirements is that all experts sitting on scientific or advisory committees must declare their interests by means of a public register, thus revealing any potential conflict of interests and precluding allegations of undue influence.

Clients and partners

RIVM has partnerships with numerous national and international organisations. In the Netherlands, we work closely alongside fellow research institutes such as the Netherlands Organisation for Applied Scientific Research (TNO), the Netherlands Institute for Health Services Research (NIVEL), the Institute of Food Safety (RIKILT), the Royal Netherlands Meteorological Institute (KNMI), the Water Division of the Directorate-General for Public Works and Water Management (RWS), the Deltares Institute for Delta Technology, NL Agency (part of the Ministry of Economic Affairs, Agriculture and Innovation) and several universities. Our contacts with planning agencies are also important. In addition, RIVM maintains close functional ties with municipalities, provinces and municipal health authorities.
At the international level, RIVM is an active member of various networks which support and advise the European Commission. We work closely with the European Centre for Disease Prevention and Control (ECDC) in Stockholm, the European Food Safety Authority (EFSA) in Parma, the Organisation for Economic Co-operation and Development (OECD) in Paris, the European Medicines Agency (EMA) in London, the European Directorate for the Quality of Medicines (EDQM) in Strasbourg, the European Environment Agency (EEA) in Copenhagen and the European Chemicals Agency (ECHA) in Helsinki. RIVM also maintains close contact with the World Health Organization (WHO) and the World Bank.

Projects and research

Changes to the National Vaccination Programme

In 2011, the National Vaccination Programme (Rijksvaccinatieprogramma; RVP) underwent two significant changes: the introduction of a new vaccine to protect against pneumococcal infections and the expansion of the target group for vaccination against hepatitis B.

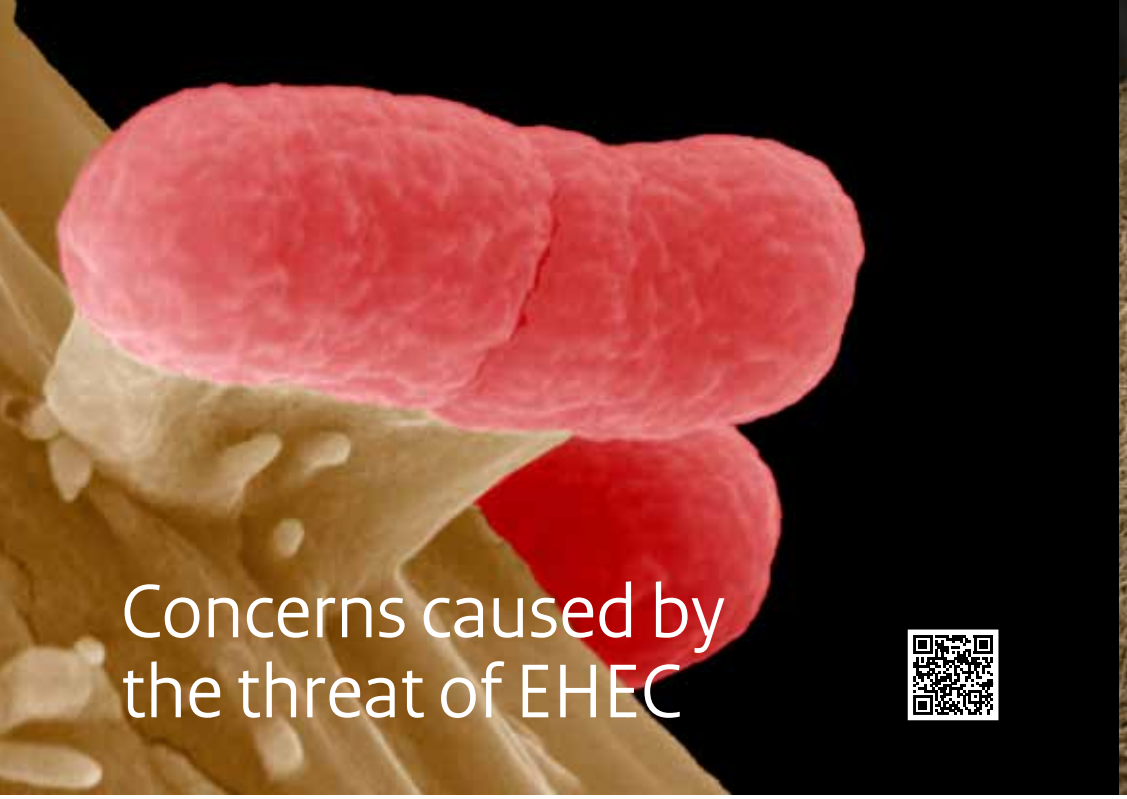
Pneumococcal infections

Vaccination against pneumococcal infections was first included in the National Vaccination Programme in 2006, at which time the vaccine in use provided protection against seven strains of the pneumococcal bacterium. A new vaccine which protects against ten strains of the bacterium was introduced in 2011. It is expected that this new vaccine, which is now available to all children born on or after 1 March 2011, will further reduce the incidence of serious pneumococcal infections.

Pneumococcal disease is an umbrella term for infections caused by the *Streptococcus pneumoniae* bacterium, of which 92 strains have so far been identified. The bacterium can often be found at the back of the throat in healthy adults and children (although it is more common in children). It is an airborne infection which can be transmitted through coughs and sneezes. Although by no means everyone who is infected will develop symptoms, the bacterium can cause very serious, life-threatening diseases such as meningitis, sepsis (blood poisoning) and pneumonia. The groups at highest risk are children under two and the elderly.

Hepatitis B

Hepatitis B is a serious disease of the liver which is caused by a virus. Since 2003, vaccination has been offered to children in certain high-risk groups. From 2011, however, all children born on or after 1 August 2011 will be offered protection against hepatitis B, as is now standard practice in many other countries. The vaccine has been shown to be entirely safe. It provides long-term protection against hepatitis B and will now be included in the standard course of injections which babies receive at the age of 2, 3, 4 and 11 months. The full benefit of the vaccination can therefore be derived with no additional attendance requirement.



Concerns caused by the threat of EHEC

A new approach to zoonotic diseases

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In May 2011, Germany reported an outbreak of the EHEC (*Enterohaemorrhagic Escherichia coli*) bacterium. A large number of patients sought medical assistance, presenting with serious kidney complaints or other symptoms such as bloody diarrhoea. Some Dutch citizens who had recently visited Germany were also infected with EHEC.
The bacterial strain concerned is extremely rare, having been detected in only a very few people. It had never before been responsible for an outbreak of this extent. Public concern prompted RIVM to form an Outbreak Management Team, which provided advice on the likely consequences of the outbreak in Germany for the Netherlands. The team stressed the importance of thorough hygiene measures to prevent any further spread of the EHEC bacterium. General practitioners were urged to bring the existing hygiene measures to the attention of any patients suffering from gastroenteritis, particularly if they had recently been to Germany. Patients were instructed not to handle food while the symptoms persisted, and those working in the healthcare sector or with small children were told to stay at home.

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A zoonotic disease is one which can be transmitted between animals and humans. The recent outbreaks of 'bird flu' and Q fever remind us that animal health and human health are closely intertwined, and that zoonotic diseases can have a major impact on both. To ensure that prompt measures can be taken, it is essential to identify the risks of an outbreak at the earliest possible stage. This calls for close cooperation between the medical experts and their counterparts in veterinary medicine.
In 2011, a new 'zoonotic disease structure' was established to provide a framework for such cooperation. It is comparable to the response structure for human infectious diseases, but with added value in the form of the involvement of the veterinary field and experts in animal husbandry. RIVM plays a coordinating role. The structure itself sets out the various tasks and responsibilities: who is to do what in the event of a (potential) outbreak of a zoonotic disease. The first link in the structure is a panel of experts who assess the situation on a monthly basis – or more frequently if the situation dictates – and discuss the possible implications of any reports of a zoonotic disease in terms of both human and animal health. Depending on the level of risk, the measures to be implemented range from the modification of the existing contingency plans to the assembly of a crisis team made up of experts in both human and veterinary medicine. The circumstances which warrant forming such an 'Outbreak Management Team' include a major outbreak or the identification of an entirely new infectious disease.

Combating bacterial resistance

In 2011, there was an outbreak of *Klebsiella pneumoniae Oxa-48* at the Maasstad Hospital in Rotterdam. This bacterial strain causes serious gastrointestinal complaints and is resistant to most types of antibiotic. This makes treating the infections difficult or in some cases impossible. Vulnerable patients, such as those in intensive care, are at particular risk.

RIVM took a proactive role in the response to this outbreak. In association with the Utrecht University Medical Centre, we tested four thousand patients for possible *Klebsiella pneumoniae* infection. Supervision of the existing hygiene measures was intensified to prevent any further spread. To reduce the likelihood of similar future outbreaks, the RIVM Centre for Infectious Disease Control formed a working group to devise plans whereby this type of hospital infection can be identified and contained more quickly. Among its proposals are the establishment of a local team responsible for ongoing monitoring in each hospital, and a website through which laboratories can report the discovery of 'exceptionally resistant micro-organisms' quickly and easily. A full-scale study of ways in which to prevent hospital infections is also planned.

Population decline linked to self-perceived health

From 2035, the population of the Netherlands will start to decline. This demographic trend is likely to be accompanied by social and societal developments which can affect public health. It is therefore important to ascertain whether there is a direct link between population decline and health.
In 2011, RIVM conducted an exploratory study examining the health situation in three Dutch regions which are already seeing a decrease in population: the Parkstad region of Southeast Limburg, Zeeuws-Vlaanderen, and the Eemsdelta region in Northeast Groningen. The study not only considered health indicators such as life expectancy and mortality rates, but asked residents to describe how they perceive their own state of health.

The findings reveal that the health of residents of these regions is not as good as the health of people in other parts of the Netherlands. The differences are most marked in Southeast Limburg, which was the first region to experience population decline. This may indicate that the regions in which the trend began later (or has yet to begin) will show the same health effects as time goes on.

The differences in health can only be partly explained by differences in the demographic composition of the population, e.g. in terms of age or socio-economic status. Other possible explanations include decreasing availability and accessibility of health care services, or changes to the residential environment. To understand and resolve the health deficit of these regions, we must develop a better understanding of such factors and their effects.

Bowel cancer screening

On 1 June 2011, the Dutch Minister of Health, Welfare and Sport (VWS) announced that a public screening programme for bowel cancer is to be introduced in 2013. The minister's decision was based on the recommendations of the Health Council of the Netherlands and an assessment conducted by the RIVM Centre for Population Screening, which showed that screening for bowel cancer in the long term has the potential to prevent 2,400 deaths each year. Participants will be sent a test kit and are invited to send a small stool sample to the laboratory. If the initial tests reveal any blood in the faeces, the person concerned will be contacted and offered a follow-up appointment for a full colonoscopy.

A gradual start

The target group for the screening programme is all men and women aged between 55 and 75. There are currently over four million people in the Netherlands who fall into this category. The programme must therefore be phased in gradually between 2013 and 2019 to ensure that there are enough health care providers trained to conduct the follow-up examinations. In 2013, only persons aged between 65 and 75 will be invited to take part. The target group will then be gradually expanded. By 2019 everyone aged between 55 and 75 will have received at least one invitation to submit a sample for screening.

Careful preparation

The Centre for Population Screening, in close consultation with all relevant stakeholders, is making the necessary preparations for the introduction of the programme. A national committee has been formed to advise RIVM on various aspects of the implementation process. There are also several working groups, each responsible for a specific aspect of the programme such as quality, capacity, uniform public information, finances and ICT structure. The screening programme will be managed by the five regional organisations which are already responsible for the national breast cancer and cervical cancer screening programmes.

Healthy schools perform better

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In early 2011, the RIVM Centre for Healthy Living introduced the 'Healthy School Accreditation Scheme' which officially recognises schools which promote a healthy lifestyle among their students. A 'Healthy School' is one which works to improve the health and wellbeing of its pupils in a structured way. It might for example have a programme to encourage physical exercise, a formal policy to prevent bullying, or it may devote particular attention to maintaining a safe and healthy school environment. Concern for health has clear benefits; it has been shown to improve school performance and reduce absenteeism. Moreover, children who learn healthy habits at an early age are more likely to practise them in later life.

The 'Healthy School' logo provides special recognition for primary schools which devote ongoing attention to the health of the children in their care. The logo demonstrates to pupils and their parents that the school considers health of its community to be very important, and that it actively supports efforts to maintain a healthy lifestyle. Schools can also qualify for certificates recognising their achievements in various specific areas such as diet and nutrition, sport and exercise, or social and emotional development. The first Healthy Schools were formally accredited in 2011. RIVM has now passed the management of the programme to GGD Nederland.

In 2011, the Centre for Healthy Living and its partners also developed an online Healthy Lifestyle Manual targeting Senior Secondary Vocation Education (MBO).

Shortened generation tests reduce need for animal testing

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In various RIVM research programmes, we aim at innovation of methods for assessing the potential harmful effects of chemical substances. In doing so, we are keen to reduce reliance on animal testing. In studies of how exposure to certain chemicals can affect reproductive health, fertility and embryonic development, for example, the 'two-generation method' is the current standard. Laboratory animals, in this case rats, are exposed to chemical substances. They produce a first generation of off-spring, which then produce the second generation. This study accounts for approximately 35% of all animal testing conducted in connection with the European Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) directive.

RIVM researchers have collated and analysed all information pertaining to multi-generation studies conducted during the past thirty years to determine whether data derived from the second generation provides any critical additional information about a substance's safety. This proved not to be the case. In practice, leaving out the second generation reduces the number of animals in a generation study from 2,600 to 1,400: a reduction of approximately 40% per study and approximately 15% for the REACH programme as a whole.

The OECD has adopted the shortened generation study protocol, although this protocol has yet to be formally implemented by the EU policy-makers. The REACH programme requires some thirty thousand substances to be tested within the next five years. A positive decision would save the lives of a huge number of laboratory animals.

National food consumption survey

Between 2007 and 2010, RIVM examined the diet of over 3,800 adults and children living in the Netherlands. The report of this study was published in 2011. Among the conclusions are that many people are still not eating enough fruit, vegetables, fish or fibre, and are therefore not meeting the recommended guidelines for good nutrition. On a more positive note, consumption of trans-fatty acids has decreased, largely because food manufacturers and processors have modified the composition of their products. Even so, the proportion of saturated fats in the average diet remains too high and overweight and obesity continue to be a significant problem.

Vitamins

The study shows that most people have an adequate intake of vitamins B2, B6, B12 and copper. However, a relatively large number fail to meet the 'recommended daily intake' of vitamins A, B1, C and E, magnesium, potassium and zinc. Further research is required to determine if and how this affects public health. In addition, the specific recommendations for certain age groups are not always followed: e.g. a higher intake of folic acid for women who are planning to become pregnant, vitamin D for seniors, iron for women of childbearing age and calcium for adolescents, for example. The Health Council of the Netherlands has advised these groups to take folic acid and vitamin D supplements.

A healthier diet

A healthy diet is an important means to control the problems of overweight and certain chronic conditions. The knowledge we have gained about current eating habits in the Netherlands will form a good basis from which to encourage better diet and nutrition. In addition to influencing the consumer's choice of foods, it is appropriate to promote changes in the composition of food products (food reformulation).

This national food consumption survey is part of an ongoing monitoring programme, for which the next round of data-gathering will start in 2012.

Off-label use of stents

Angioplasty is a procedure to widen narrowed blood vessels, for example coronary arteries. In many cases, the cardiologist will insert a 'stent': a small scaffold-like device which supports the blood vessel wall and keeps it open. One type of stent – known as a drug-eluting stent (DES) – releases a minute quantity of a drug over time to ensure that the blood vessel does not become narrowed again. These stents must be extensively tested for safety and efficacy prior to their market authorisation. Based on tests and clinical investigations, the manufacturer produces a full and detailed description of the intended use of the stent, including the specific indications and the characteristics of the patients for whom the product was proven to be suitable. In practice, however, specialists regularly use these stents in patients who do not meet all the indicated criteria, for example in cases where no effective alternative treatment exists. This is known as 'off-label use'.

In 2011, RIVM completed a study examining both the on-label and off-label use of stents. This study was conducted after questions had arisen at international level concerning the possible safety risks of off-label use of drug-eluting stents. Based on the data available, it is not possible to state whether these stents are any more or less safe than bare metal stents, i.e. stents without drugs. However, off-label use of both types carries greater risk than on-label use. This is partly because off-label use is more common in patients who already have a higher risk profile. In off-label use, DES were found to be more effective than bare metal stents. Moreover, some of the new generation of DES appear to be both more effective and safer than the first generation. With increasing experience, off-label use of DES may evolve into a standard treatment option, and more experience could also lead to further product innovation.

RIVM recommends that further research should be conducted among cardiologists to gain a more accurate picture of the current situation in the Netherlands.

Further research into allergic reactions to cosmetic products

In 2011, RIVM evaluated the first two years of the CESES (Consumer Exposure Skin Effects and Surveillance) pilot project. CESES is a system which records and monitors skin complaints and other hypersensitivity reactions following the use of cosmetic products. Since the project was launched, some 1,700 reports have been received from consumers, general practitioners and dermatologists.

Alongside make-up and sun creams, it appears that hair and skincare products can cause a number of skin complaints. To determine exactly which product ingredients are responsible, dermatologists conduct allergy tests. These tests have revealed that patients generally react to a certain preservative, and to (co-)polymers which are added to make the product easier to apply. Fragrances are another significant cause of allergic reactions. Given the number of reported reactions and the widespread use of such substances in cosmetic products, RIVM advises that all complaints should be carefully monitored using the CESES system. We also recommend that further research should be conducted, particularly with regard to (co-)polymers. During the report year, it was decided that the CESES project should continue until at least the end of 2012 and that the number of dermatologists involved in the project will be increased. As before, consumers can report any problems through the website at www.cosmeticaklachten.nl.

Waist measurement as a predictor of life expectancy

22 Research suggests that a person's waist measurement, particularly in later life, is an important predictor of the risk of death from cardiovascular disease. Older men with a waist girth of 123 cm or more are at higher risk, as are older women with a girth exceeding 105 cm. In both cases, the risk of death from cardiovascular diseases is twice that of a person with a smaller waist measurement. These are the findings of a study which concluded in 2011. It involved over 58,000 seniors in the age group 65 to 75 and examined the link between bodyweight (whether too high or too low) and mortality. The results can be used to formulate guidelines for weight management, thus tackling the problem of obesity.

The study further revealed that seniors who are underweight (Body Mass Index <20 kg/m2), which commonly occurs with a small waist girth (<94 cm in men and <80 cm in women), are also twice as likely to die prematurely than those with BMI in the 'healthy' range of 20 to 25 kg/m^2 combined with a small waist girth. This suggests that both waist measurement and BMI are predictors of mortality risks. However, being underweight has different underlying causes than being overweight, whereupon a different treatment regime is required.

This study is part of the RIVM Strategic Research Programme (SOR), in which we attempt to anticipate issues that are likely to become of major social relevance in future.

Drugs in surface water

23 To safeguard the quality of drinking water in the Netherlands, considerable attention is devoted to risk management. Water supply companies analyse water for various substances and pollutants. RIVM collects and collates the resultant data and produces an annual report on the quality of the country's drinking water. There are a number of substances which are subject to legislative standards and maximum permissible levels. In addition, RIVM devotes attention to previously unrecorded environmental pollutants.

In 2011, the surface water of the rivers Rhine and Meuse was shown to contain extremely low concentrations of amphetamines, tranquilisers, barbiturates, opiates and cocainics. Most substances are removed or their concentration further reduced during the purification process. As a result, only three substances can be detected in the drinking water supply itself. All are barbiturates. The provisional drinking water limits for these substances are not exceeded.

A large proportion of the substances detected in the Meuse and Rhine originates in other countries, although the effluent discharged by water treatment plants in the Netherlands does make some contribution as well. 65 Water samples were analysed to detect the presence of 37 specific drugs and/or their degradation products. The study was commissioned by the Human Environment and Transport Inspectorate and conducted by RIVM in association with the KWR Watercycle Research Institute and the Research Institute for Pesticides and Water at Universitat Jaume I, Castellón (Spain).

RIVM's role in national disaster response

There are a number of disaster situations in which RIVM has an important function. Providing a rapid response to any (impending) disaster is a task for the government, being best placed to take the necessary action. A prompt analysis and appropriate measures are of crucial importance. A threat can take many forms, including the potential outbreak of an infectious disease, a food safety incident or a major environmental accident. RIVM does not perform its tasks in isolation but in collaboration with other relevant organisations. Practice exercises are regularly conducted with these partners.

One example of the RIVM's disaster response apparatus is the Radiological Information Back Office (BORI), part of the Nuclear Planning and Advice Unit. BORI was mobilised in 2011 following the nuclear accident in Fukushima (Japan).
A second example of RIVM's disaster response function is the Environmental Accident Service (MOD), which is mobilised in the event of a major accident resulting in the release of potentially hazardous substances. The MOD is part of the Environmental Accident Policy Support Team (BOT-mi) which comprises representatives of various organisations including KNMI, RIKILT, the Water Division of the Ministry of Infrastructure and the Environment, and the Netherlands Food and Consumer Product Safety Authority (nVWA). Under the coordination of the Ministry of Infrastructure and the Environment, the partners collect and share information about possible risks to public health or the environment. Among the incidents requiring the MOD's input in 2011 was the fire at the Chemie-Pack plant in Moerdijk.

Fukushima nuclear accident

On 11 March 2011, a major undersea earthquake struck off the coast of Japan. The resultant tsunami caused significant damage to the nuclear reactor at Fukushima, leading to the release of radioactive particles. The situation prompted many questions in the Netherlands. RIVM assisted the government in answering those questions, most of which were from concerned members of the public or companies active in Japan. Following the accident, RIVM made additional measurements of atmospheric radioactivity in the Netherlands. Between 23 March and 11 April 2011, a slightly elevated level of radioactivity was noted. However, this presented absolutely no risk to public health. By June 2011, the situation had returned to normal and no traces of radioactivity originating from Fukushima could be detected.

The Moerdijk fire

On of Friday 5 January 2011, a major fire broke out at the Chemie-Pack plant in Moerdijk. Because chemical substances were stored on the premises, the MOD was called in to assist the fire service with environmental measurements and analyses. MOD personnel were at the site to take air samples and samples of deposits on nearby surfaces. The RIVM advised the ministry and the security regions about the necessity of health checks for local residents and those attending the scene.

Cancer following Balkan deployment

More knowledge about biocides

26 In 2000 the international lay-press media reported on cases of leukaemia among Balkan-deployed soldiers, which some attributed to alleged exposure to depleted uranium (DU), originating from DU-containing ammunition used by NATO forces. The Netherlands Ministry of Defence commissioned RIVM to conduct a health investigation.

Based on the results of its study, RIVM concludes that the incidence of leukaemia among service personnel deployed to the Balkan region between 1993 and 2001 is no higher than among personnel that had not been deployed to this region. This was an extremely careful and extensive study, involving more than 150,000 serving and former military personnel. It reveals that the 18,000 men and women deployed to the Balkans are actually at lower risk of developing cancer than other (former) service personnel and members of the general population in the same age group. In fact, even those who were not posted to the Balkans show a lower risk of cancer than other Dutch citizens of the same age. RIVM assumes that this is because military personnel are generally fitter and in better overall physical health than their civilian counterparts.

27 Ant traps, woodworm spray, fungicides in bathroom paint: all are 'biocides'. Biocides are chemical products which are intended to kill certain organisms and are part and parcel of modern life. Nevertheless, there are some questions surrounding biocides and their use. What is a biocide and what is not? Who uses them? And are they always used correctly?

In January 2010, the Biocides Knowledge Network was set up to answer these and other questions. The network wishes to ensure that there is a balanced consideration of the advantages of biocide use against the risks. It will therefore seek to bring together the various stakeholders and encourage knowledge sharing. One means of doing so is the annual meeting, which in 2011 was held in Rotterdam and was attended by 120 people. The 2012 meeting is to be held in The Hague on 11 September, when the topic will be the proposed national Biocides Regulation.

The Biocides Knowledge Network is open to any organisation which is involved in biocide production and/or usage. It is coordinated by RIVM and funded by the Ministry of Infrastructure and the Environment.

Organisation and financial data

Staff

At year-end 2011, RIVM employed 1,603 persons, or 1,434.4 FTEs. The FTEs include 49% women. Among female employees, 48% operate at or above graduate level, against 58% of all male employees. The number of professors employed by RIVM at year-end 2011 was 23.

The average age of the RIVM workforce was 46 and the average length of service 12 years.

Measured across the full year, the sick leave rate for 2011 was 3.4%, i.e. 0.6% lower than the maximum standard of 4.0% set for RIVM.

RIVM as a whole received a score of 7.2 in the employee satisfaction survey.

Organisation chart per 1 April 2012*

Executive Board

Infectious Diseases and Vaccinology	Public Health and Health Services	Environment and Safety	
EPI Epidemiology and Surveillance	**CGL** Centre for Healthy Living	**BMT** Centre for Biological Medicines and Medical Technology	**CEV** Centre for External Safety *
LCI National Coordination Centre for Outbreak Management	**CBV** Centre for Population Screening	**CVG** Centre for Nutrition and Health	**CMM** Laboratory for Environmental Monitoring
LIS Laboratory for Infectious Diseases and Perinatal Screening	**PZO** Centre for Prevention and Health Services Research	**GBO** Laboratory for Health Protection Research	**IMG** Advisory Service for the Inspectorate, Environment and Health
LZO Laboratory for Zoonoses and Environmental Microbiology	**VTV** Centre for Public Health Forecasting	**KCF** Centre for the Quality of Chemical-Pharma-ceutical Products	**LER** Laboratory for Ecological Risk Assessment
VAC Vaccinology	**KB** KiesBeter	**SIR** Centre for Substances and Integrated Risk Assessment	**LSO** Laboratory for Radiation Research
		NKCA National Knowledge Centre on Alternatives to Animal Testing	**MGO** Centre for Environmental Health Research
			SEC Expertise Centre for Substances

* Operational

RCP/IOD Regional Coordination of Programmes / Vaccine Procurement, Storage and Distribution

PNH New Accommodation Project Bureau

Director-General: Prof. André van der Zande

Deputy Director-General: Walter van Wijngaarden

Director of the Infectious Diseases and Vaccinology Division: Prof. Roel Coutinho

Director of the Public Health and Health Services Division: Dr Moniek Pieters

Director of the Environment and Safety Division: Dr Marcel van Raaij

* RIVM is currently undergoing a reorganisation. The organisation chart will be updated accordingly in due course. The most recent version can be found on our website at www.rivm.nl.

Financial statements 2011

Balance sheet at 31 December 2011
(all amounts in EUR x 1,000)

	31-12-2011	31-12-2010
Assets		
Intangible fixed assets	311	826
Property, plant and equipment	12.356	8.936
- land and buildings	-	-
- installations	2.336	2.433
- other fixed assets	10.020	6.503
Inventory	49.123	17.200
Accounts receivable	5.714	9.997
Outstanding items	49.881	55.354
Cash and cash equivalents	55.047	28.943
Total assets	172.432	121.256
Liabilities		
Equity	41.781	4.571
- operating reserve	21.147	7.690
- undistributed profits	20.634	3.119-
Loans taken out within the Ministry of Finance	-	-
Provisions	21.224	16.332
Accounts payable	18.659	8.863
Payable	90.767	91.490
Total liabilities	172.432	121.256

Itemised statement of income and expenditure in 2011
(all amounts in EUR x 1,000)

Itemisation	A Amount originally budgeted	B Actual amount	C = B - A Difference
Income			
Revenues from Ministry of Health, Welfare and Sport (owner)	17.956	29.759	11.803
Revenues from Ministry of Health, Welfare and Sport (commissioning body)	104.296	130.301	26.005
Revenues from Ministry of Infrastructure and the Environment	48.686	45.872	2.814-
Revenues from Ministry of Economic Affairs, Agriculture and Innovation	1.350	6.680	5.330
Revenues from other departments	2.000	8.133	6.133
Revenues from third parties	172.404	167.632	4.772-
Interest received	100	294	194
Released from provisions	-	1.990	1.990
Exceptional revenues	-		
Total income	346.792	390.662	43.870
Expenditure			
Operating expenses	341.883	360.518	18.635
Interest paid	393	278	115-
Depreciation	4.516	5.836	1.320
Added to provisions	-	3.396	3.396
Total expenditure	346.792	370.028	23.236
Balance	-	20.634	20.634

Notes to the financial statements

The itemised statement shows that income and expenditure were significantly higher than budgeted. This is due to the prescribed system for preparing the budget, which allows inclusion only of hard undertakings given by primary clients. The statements include income and expenditure for contracts awarded in the course of the fiscal year. The 'actual amount' columns also include the revenue and expenditure of the public departments of the Netherlands Vaccine Institute (NVI) which were absorbed into RIVM on 1 January 2011. The relevant amounts could not have been foreseen at the time of producing the budget.
The operating result (revenue less expenditure) for 2011 is €20.6 million.
The increase compared to the preceding year is largely attributable to:

- a higher level of billable project work combined with lower costs
- reduced accommodation costs
- a significant proportion of the balance total for 2011 is further to the absorption of the public departments of the NVI and is therefore incidental in nature.

Highlights from the Annual Environmental Report

In 2011, RIVM shared its premises with the Netherlands Vaccine Institute (NVI) and the Netherlands Environmental Assessment Agency (PBL). The environmental permit is issued for the entire site, with various environmental facilities (such as wastewater and waste collection facilities) being shared. Consequently, the Annual Environmental Report relates to the combined activities of RIVM, NVI, and PBL.
RIVM obtained a new combined permit in 2008 under the Environmental Protection Act and the Pollution of Surface Waters Act.

The current permit is based on the Company Environmental Plan which is valid for the period 2011 to 2014. This plan sets out various improvement measures, including the installation of new oil storage tanks and a new combined heat-and-power generator. Some improvement measures have already been implemented. They include the installation of the new oil storage tanks, together with underground oil pipelines.

- Compared with 2010, water consumption increased by 8.3% to 127,400 m^3 due to the higher water requirement of the sterilisation and vaccine production processes.
- The quantity of pollution units in wastewater decreased from 707 to 651 further to reduced discharges of organic substances.
- The total waste stream increased by 12% compared with 2010 to reach approximately 860 tons. Waste includes waste paper, industrial waste, garden waste, and laboratory waste.

RIVM, NVI and PBL spent approximately €5 million on environmental, energy and water costs in 2011 (including energy consumption, waste processing and waste water levies).

Scientific Supervisory Committee

The task of the Scientific Supervisory Committee is to monitor the scientific quality of RIVM's activities. It does so by maintaining supervision over, and advising on, the level and quality of the research conducted, as well as the quality assurance system in use by RIVM. Based on its findings, the Committee issues an annual statement about the quality of research and the effectiveness of quality assurance measures. The Committee also reports its findings to the Institute's owner, the Deputy Secretary-General of the Ministry of Health, Welfare and Sport.

The Committee took note of the intensive programme of change launched by the Secretary-General in 2011 for the reorganisation of the various operational entities. The Committee will continue to monitor developments and their potential influence on scientific quality, whereby attention will also be devoted to the international activities.

Prof. H.J.P. Eijsackers was appointed to the Scientific Supervisory Committee with effect from 1 July 2011. He will make a valuable contribution based on his extensive expertise and experience in environmental matters.

The report year saw the amalgamation of the RIVM Strategic Research Programme (SOR) with the Strategic Vaccine Research Programme (SVOP) formerly conducted by the Netherlands Vaccine Institute.
The Committee has finalised its evaluation report of the SOR for the period 2007 to 2010, and wishes to congratulate all concerned on the results achieved, as well as thanking them for their input and commitment.

Further to the Evaluation Selection Process for 2011-2014, the Committee concludes that it should now play a more reflective role. The Committee will assess scientific quality based on the findings of the evaluation report.

The Committee has been informed about the results of the Medicines Chain Research Programme. It will continue to monitor developments closely, and looks forward with interest to the follow-up to the programme which will form part of RIVM's international scientific profile.

In 2011, the Committee conducted a self-evaluation. The findings reveal general satisfaction regarding interaction with the institute's senior management, the effectiveness of its supervision, and the resources it enjoys. A report was submitted to the Deputy Director-General of the Ministry of Health, Welfare and Sport, with whom it was discussed.

The annual 'thematic meeting' devoted attention to two topics of current interest: 'An approach to the prevention of nuclear accidents' and 'RIVM's involvement in the Electromagnetic Fields Knowledge Platform'.

During the report year, three processes were defined to improve coordination between the research programmes of the Centre for Infectious Disease Control and those of the Vaccinology division. An international scientific audit was held, examining all vaccine-related activities undertaken by RIVM. A strategic exploratory study examined ways in which to optimise the form and performance of RIVM's vaccine-related tasks, resulting in the production of a position paper for the Vaccinology division. The Committee also held a strategic discussion about RIVM's future role in the field of vaccines and vaccinology. The Committee welcomes the steps taken to consolidate the organisation's position in this area. We are confident that such measures will safeguard the organisation's expertise in vaccinology and the continuity of its scientific programmes.

This annual report is also available in Dutch.

For additional printed copies of this report, please e-mail info@rivm.nl or call +31 (0)30 274 28 40.
A pdf version can be downloaded from www.rivm.com.

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