



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

Annual Report *2013-2014* *Biosecurity Office*



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Introduction

The Biosecurity Office was set up by the Dutch government in 2013 as a national knowledge and information centre. Its mission is to improve biosecurity awareness in the Netherlands, develop knowledge products and tools, and support the government in exploring the options for additional biosecurity legislation and regulations in the Netherlands. It was recently announced that the Biosecurity Office will continue to operate in 2015. Its tasks for 2015 will be to continue its current activities, further expand the network and accumulate more knowledge. This annual report for 2013-2014 provides an overview of the Biosecurity Office's work: support for government authorities, network and knowledge development, information activities and workshop days, educational initiatives, the knowledge products it has developed, and international activities (Box 1).

Members of the Biosecurity Office

The Biosecurity Office consists of eight highly motivated members from different centres of the National Institute for Public Health and the Environment (RIVM). The Biosecurity Office works closely with various experts from other organisations in order to ensure that its knowledge products meet the needs of practitioners in the field and to enable it to pass on biosecurity alerts from experts to the appropriate government channels.

“With the knowledge and expertise available in-house, the Office looks at biosecurity from various angles: biosafety and biosecurity, controlling infectious diseases, environmental microbiology and the emergency services.”

Core tasks of the Biosecurity Office

- Informing organisations about government measures relating to biosecurity
- Raising awareness of biosecurity among organisations' employees
- Distributing biosecurity information products among organisations
- Promoting the Biosecurity Toolkit to organisations
- Supporting the government

Controlling-infectious-diseases
GMO-Office
Biosecurity
Environment
Public-health
Biological-Incidents
Biorisk
Biorisk-management
Biosafety
Zoonosis
Safety
Environmental-microbiology



Supporting the government

Biosecurity is a matter of concern to the government. Over the past few years the government has been working on an integrated policy in this area covering the three aspects of biological risks: biosafety, biosecurity and dual use. The objective is to prevent both the accidental and deliberate spread of dangerous biological material from laboratories. The combination of biosafety and biosecurity is also referred to as biorisk management ([see box 3](#)).

The Biosecurity Office supports the interdepartmental Biosecurity Working Group ([see box 4](#)) by providing it with knowledge and expertise that will help shape policy on biorisk management in the Netherlands ([see box 5](#)). The Office acts as a bridge between the government and organisations in the Netherlands, providing important input from the field for the policymaking process. By involving biosecurity stakeholders it has been able to disseminate knowledge and build support for biosecurity. The government has also made use of the Office's expertise in national issues: for example, the Biosecurity Office took part in the focus group that developed the Royal Netherlands Academy of Arts and Sciences' advisory report '[Improving Biosecurity](#)'.





In the event of an incident at a high-risk facility, it is important to ensure that the emergency services are informed. If an outbreak of an infectious disease occurs, it is important to trace the potential source. The government has therefore tasked the Biosecurity Office with managing a list of facilities that handle high-risk biological material. The Biosecurity Office has professionalised this database in the preparatory phase and has supplemented information from the Ministry of Infrastructure and the Environment (IenM) and the Ministry of Social Affairs and Employment (SZW) with information from the Ministry of Economic Affairs (EZ). By setting up this list, the Dutch government is moving closer towards implementing international initiatives such as the Biological and Toxin Weapons Convention (BTWC) and the United Nations Security Council Resolution 1540 (UNSC resolution 1540).



Once a year, the Biosecurity Office provides the government with a monitoring report in which it details major biosecurity incidents and developments over the past year. Any urgent biosecurity issues that arise during the course of the year are reported to the government directly. The Office will continue to support and alert the Dutch government in 2015.

Biorisk management:

Biosafety: Keeping bad bugs away from people.

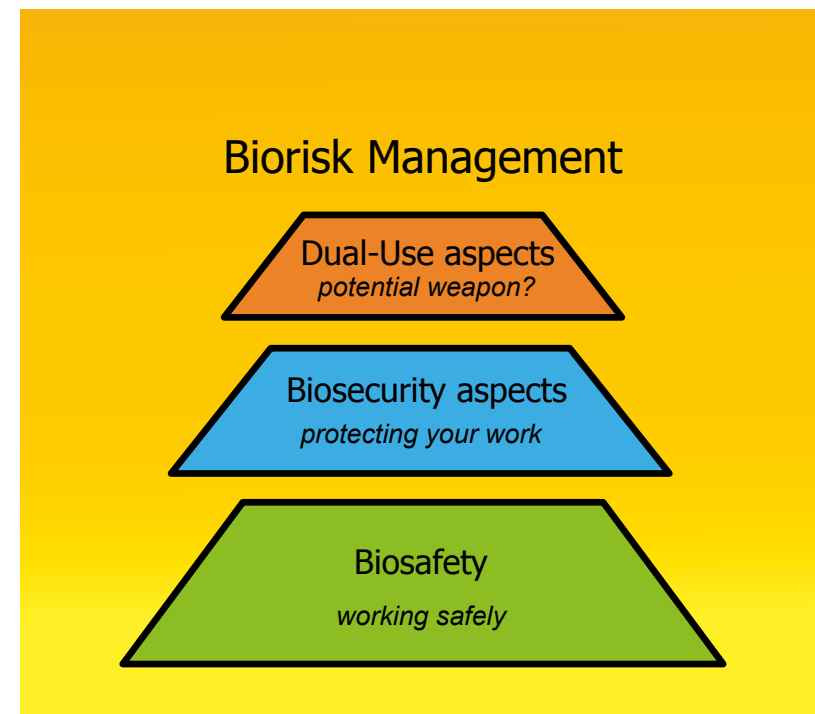
Preventing the accidental spread of biological materials from a laboratory. This is about protecting people and the environment against the dangerous effects of these materials.

Biosecurity: Keeping bad people away from bugs.

Preventing the deliberate spread of biological materials or knowledge from a laboratory by malicious parties. This includes protecting materials, knowledge and transportation with the aim of protecting society as a whole.

Dual-use research: research or knowledge development in the life sciences that has both civilian and potential military applications. An example of this is research into enhancing the disease-producing abilities of pathogens. A potential civilian application could be the development of vaccines, whereas such knowledge or pathogens could also be used as a biological weapon.

Biorisk management: At the international level, the combination of *biosafety* and *biosecurity* is also referred to as *biorisk management*. The risk of spreading biological material can be minimised by taking adequate measures. The biorisk management policy being developed by the Dutch government focuses on combining *biosafety*, *biosecurity* and *dual-use* under the heading of *biorisk management*.



Research with biological material involves biosafety, biosecurity and dual-use aspects. Working safely, protecting one's work and analysing whether it could potentially result in a biological weapon come together in an organisation's biorisk management policy, or biorisk management system.

Departments involved in the Biosecurity Working Group:

- Ministry of Health, Welfare and Sport (VWS),
- Ministry of Security and Justice (V&J),
- Ministry of Infrastructure and the Environment (IenM),
- Ministry of Economic Affairs (EZ),
- Ministry of Foreign Affairs (BuZa),
- Ministry of Education, Culture and Science (OCW),
- Ministry of Social Affairs and Employment (SZW)



Core objectives of biorisk management policy, as formulated by the Dutch government:

“The core objectives of the biorisk management policy are to prevent the accidental and deliberate spreading of biological agents and high-risk knowledge, to reduce society’s vulnerability to this spreading, and to protect society against misuse of biological agents and knowledge.”



Building networks

Informing organisations about biosecurity, raising biosecurity awareness and involving organisations in biosecurity are part of the core tasks of the Biosecurity Office ([see box 1](#)). In 2013 and 2014 the Office gradually built and expanded a network. .

To make contact with biosecurity stakeholders, over the past two years the Biosecurity Office has visited a large number of organisations and associations, focusing on the group of professionals who could potentially be involved in biosecurity and who are closely associated with laboratory activities, such as biological safety officers and general safety or security officers. Following this, the Office expanded the network by setting up an expert group with professionals. During the visits, the organisations and professionals were informed about government policy and the Office's activities. In addition to these visits to companies on the ground, the Office also visited ten industry and umbrella organisations.

The expert group helps the Office to test ideas and knowledge products so that their development can directly incorporate the wishes of people on the ground. The expert group consists of a team of dedicated professionals who give critical feedback on government policy. The Office puts these critical points forward at interdepartmental meetings, which benefits the bridging role played by the Biosecurity Office.

A major step forward in the dissemination of knowledge and in the raising of awareness of biosecurity was taken at the end of 2014. All organisations working with biological material were invited to attend two Biosecurity Workshop Days. The attendance was high: more than 200 people from various organisations attended. This has enabled the Biosecurity Office to develop and facilitate a biosecurity network.



Biosecurity Workshop Days

In 2014 the Biosecurity Office concluded its preparatory phase with a national networking event. The first national biosecurity workshop days were a great success.

More than 200 participants came together to learn more about biosecurity. The participants formed a mixed audience representing different fields of work, ranging from biological safety officers, policy advisers, researchers, clinical microbiologists and occupational hygienists to security managers.

In addition to building a network, the aim of the workshop days was to introduce participants to biosecurity, raise awareness of it and provide professionals with information on good practices in biosecurity. During the plenary morning programme, various speakers provided an overview of biosecurity and explained the latest situation and developments in this field. To ensure that both novices and experts on biosecurity were properly catered for, in the afternoon participants were able to choose two workshops from a varied programme. The various workshop sessions were facilitated by experts in the field, from the government and from the Biosecurity Office. The participants very much appreciated the variety in the workshops, rating the workshop days with an average score of 7.6 out of 10.





Workshop sessions

1. Introduction to biosecurity
2. How can I convince my boss of the need for biosecurity? (Management and organisation)
3. Can I trust my colleagues? (Personnel screening)
4. Is it feasible, is it allowed and do we want it? (Bioethics and dual use)
5. Help, my organism (or information about it) needs to cross the border! (Transport)
6. Looking to the future: working creatively with genes and DNA (Synthetic biology)
7. Break-ins cause outbreaks (Protecting materials, people and information)



Education

It is important to ensure that personnel at all levels of an organisation are properly educated and are aware of the biosecurity risks associated with working with high-risk pathogens. The Biosecurity Office organises talks, guest lectures and information sessions on bioterrorism, biosecurity and dual use.

The Biosecurity Office has held presentations and talks on various occasions such as at conferences, workshops and training courses. It has also held guest lectures at universities and colleges for life science students. The Office also runs the biosecurity part of the annual two-day training course for biological safety officers. The Biosecurity Office is developing the training for Biorisk Professional (Box 7).



Training for Biorisk Professionals

The worldwide trend is not to treat biosafety and biosecurity as separate issues in an organisation but to combine them under the heading of biorisk management. In developing its biosecurity policy, the Dutch government aims to integrate it as far as possible with existing biosafety policy in order to arrive at a biorisk management policy that combines both biosafety and biosecurity. One way of anchoring biorisk in an organisation is to appoint a Biorisk Professional. A Biorisk Professional can combine tasks that are currently divided between different professionals and professions within an organisation. For example, they can combine security with health and safety and effective risk assessment (safety, security and dual use). Training for Biorisk Professionals is being developed in close collaboration with the biosecurity expert group. The group recommends basing the training on modules described in the Biosafety Professional Competence standard (European Committee for Standardisation (CEN) Workshop Agreement 16335).

Knowledge products

The Biosecurity Office not only shares knowledge but also develops products that enable this knowledge to be applied in practice.

Website

Background information and most of the knowledge products can be found online at: www.bureaubiosecurity.nl/en. This website is available in both Dutch and English in order to reach an international audience.

Biosecurity Toolkit

The Biosecurity Toolkit is an example of a knowledge product. The toolkit is based on eight biosecurity pillars: physical measures, personnel reliability, accountability for materials, transport security, information security, awareness, response, and management. The toolkit is anonymous and consists of a series of questionnaires. By filling these in, an organisation can gain a quick impression of its own strengths and weaknesses in biosecurity. The user can then click through to the boxes and good practices, in which tips are provided for strengthening biosecurity in the organisation. The Office recently published an article on the online Biosecurity Toolkit in a special 'dual use' issue of [Frontiers in Public Health](http://journal.frontiersin.org/Journal/10.3389/fpubh.2014.00197/full)¹ in which the toolkit is explained to an international audience. The toolkit can be found at: www.biosecuritytoolkit.com.



Risk classification lists

To provide an overview of the various biosafety and biosecurity classification lists available and the differences between them, there is a page on the website that compares the different lists, including the various animal, plant and human pathogen biosafety lists and the export control list. http://www.bureaubiosecurity.nl/en/Biological_agents.

Vulnerability analysis

In late 2014 the Office started developing an online vulnerability analysis designed to help organisations perform their own analyses based on a number of different real world scenarios. This tool will be published on the website in 2015.

Information products

Over the past two years the Office has developed a range of information materials such as a flyer, a banner and background information, all of which can be found on the website. The information materials were developed in collaboration with the expert group.

Biosecurity film

In September 2014 the Biosecurity Office launched a film describing the importance of biosecurity within organisations. It is aimed at organisations but it can also be used for presentations by the Office itself and is freely available for use by organisations to inform their own employees. The film is based on the eight biosecurity pillars of the Toolkit.

¹ Publication freely available via: <http://journal.frontiersin.org/Journal/10.3389/fpubh.2014.00197/full>



International

Biosafety, biosecurity and dual-use aspects are subjects that are high on the international agenda. The Biosecurity Office takes part in international initiatives to share knowledge on biorisk management.

The Office has also participated in various international and global events with the aim of responding to recent international developments and issues. Participation at such events is also important from the point of view of profiling the Netherlands in respect of biosecurity and for the application of international knowledge in the Netherlands. The Office acts as an expert at meetings of the United Nations Interregional Crime and Justice Research Institute (UNICRI) and the World Health Organisation (WHO). It is also involved in international biorisk management projects, including a project in Uganda as part of the G8 Global Partnership Programme.

In addition, the Biosecurity Office has represented the Dutch government in European matters such as the EU Action Plan on Chemical, Biological, Radiological and Nuclear Security (CBRN action plan) at the Biological Subgroup in

Paris. In this context, in 2013 the Office participated in CBRN Action B2, in which six European countries worked on the development of an international guideline. The Office represented the government at various international meetings such as the Meeting of Experts (MXP) and the Meeting of States Parties (MSP) of the Biological and Toxin Weapons Convention (BTWC) in Geneva. The BTWC is an international convention against the use, development and stockpiling of biological weapons and their destruction.

For the purpose of sharing knowledge and information at the international level, the Office attends conferences and events such as the annual European Biosafety Association (EBSA) conference. The Biosecurity Office also visited a Danish sister organisation, the Centre for Biosecurity and Biopreparedness. Denmark has extensive biosecurity laws and regulations and runs a Biosecurity Officer training course.

Results of the Biosecurity Office objectives for 2013-2014

The remit given to the Biosecurity Office by the Dutch government for the preparatory phase in 2013-2014 contained a number of objectives which are set out in the table below. The results achieved for each of the objectives are also given.

Objectives for 2013-2014	Results
At least 50% of institutions registered in the database to undergo Biorisk Professional training	The plan for the BRP training was agreed with the expert group. Practitioners and the expert group regard the BRP and its tasks as a positive step. It is recommended to adhere as closely as possible to CWA15793 (Laboratory Biorisk Management) and CWA16335 (Biosafety Professional Competence). These contain descriptions of competencies, skills and roles as well as modules. At the time of reporting, the plan for the BRP training has not yet been developed into a fully-fledged training course because the government has not yet decided what position the BRP should be given in future biorisk management policy.
Information pack for institutions to be distributed to 100% of institutions registered in the database.	All organisations in the database have been approached and offered the workshops.
At least 60% of institutions registered in the database to have used the Biosecurity Toolkit to raise awareness, measured via a counter on the website.	More than 60% of organisations in the database have used the toolkit, and all organisations have been made aware of the toolkit through hands-on workshops, talks and information provision
At least 70% of institutions registered in the database to be made aware of the government's biosecurity activities, measured by the number of contacts with the institutions.	More than 70% of institutions in the database are familiar with the government's activities in this area.
Six-monthly reports of relevant developments (scientific developments, alerts from the field, international developments)	Relevant biosecurity alerts submitted annually, along with ongoing reports of important biosecurity developments to departments. The next report for 2014 will be published in early 2015.
Progress report on the entire preparatory phase taking the above points into account. Report also to contain a proposed structure for the Biosecurity Office in the structural phase, including tasks, activities, targets and proposed budget.	- Progress report 2013 - Annual report 2013-2014 + covering letter
Local access to data by emergency services (where admissible within legal and national security framework)	Since there were no plans for a legal and national security framework during the preparatory phase, no further action has been taken on this point.

Looking towards the future

The Biosecurity Office will remain operational in 2015. It will continue its current activities, i.e. providing information and involving organisations in biosecurity, developing knowledge products and supporting the government. In addition to its current tasks, the Office has identified three aspects for development in the coming year: education, involving senior management, and making information accessible to the emergency services.

Education

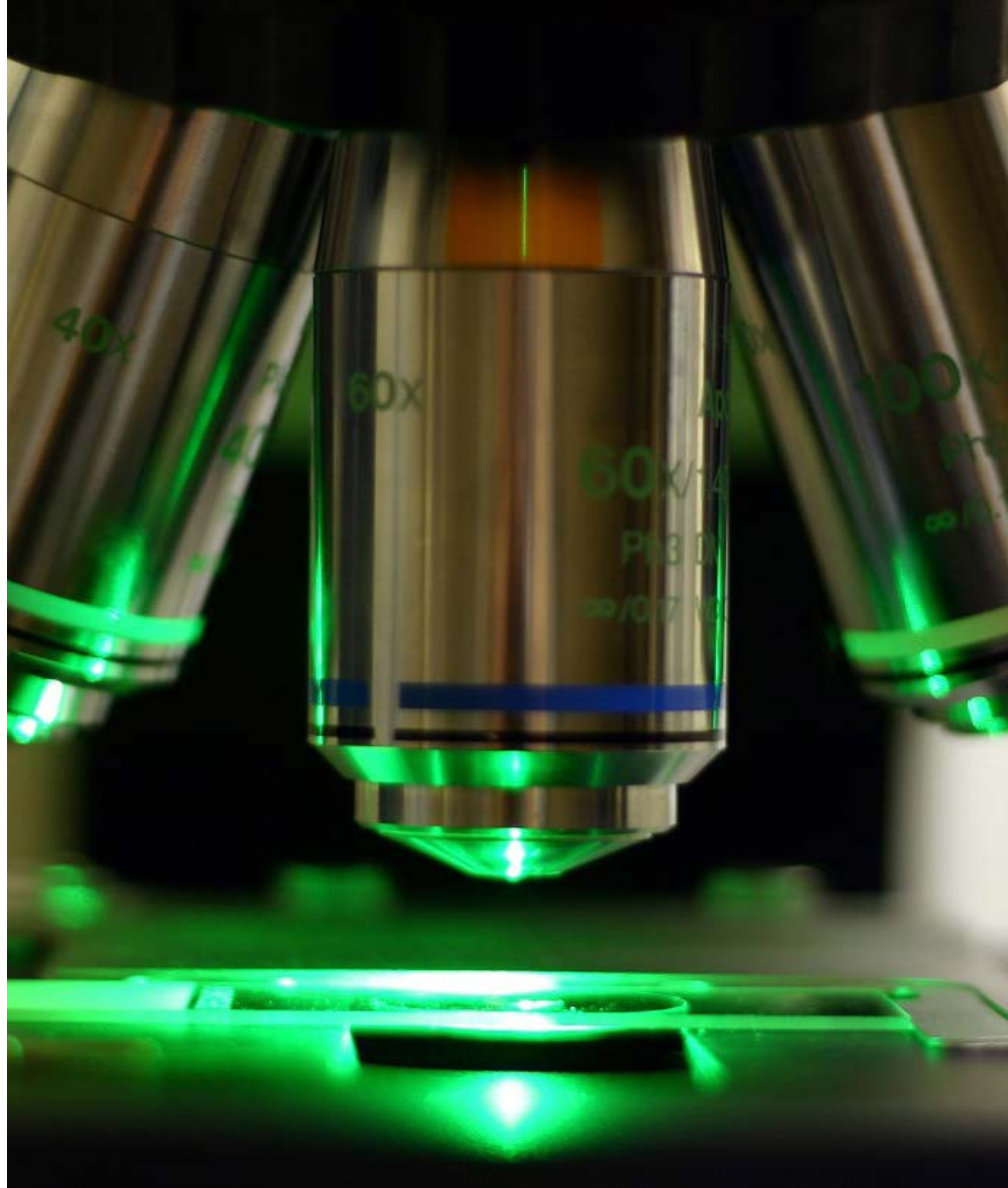
Training of existing or prospective employees working with pathogens is a good opportunity to raise awareness of the risks involved in biosecurity. The Biosecurity Office will therefore be making efforts to embed the subjects of biosecurity and dual-use research in university and college life science courses.

Involving senior management

Creating support for biosecurity among senior executives is an essential precondition for an effective biosecurity policy within an organisation. In 2015 the Biosecurity Office intends to get the management teams of organisations working with high-risk pathogens more closely involved in biosecurity.

Making information accessible to emergency services

In the Netherlands, crisis management and the emergency responses are organised by 25 public bodies called safety regions. These safety regions have a role to play both in preparing for incidents and in attending incidents involving biological material. In 2015 the Office will explore the possibility of setting up a process for combining regional and national information so that the safety regions have access to the knowledge and information they need, enabling them to respond quickly and confidently in the event of a biological incident.





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