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# Public Knowledge Organisations in the Netherlands

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This publication provides a factual overview of a group of knowledge-based organisations that have so far received little attention as part of the Dutch knowledge infrastructure. We call them 'public knowledge organisations' (PKOs) because they play a public role and have a wide-ranging set of knowledge-driven tasks.

# 1 Introduction

Public knowledge organisations constitute a separate group within the Dutch knowledge infrastructure, alongside the Netherlands' universities and university medical centres and the research organisations governed by the Royal Netherlands Academy of Arts and Sciences (KNAW) and the Netherlands Organisation for Scientific Research (NWO). Although each organisation is unique in its role and mission, public knowledge organisations share a number of distinguishing features. The most significant of these is that they combine subject-specific research with the provision of knowledge-intensive services. Their main *raison d'être* is therefore not to contribute to the growth of knowledge by means of research – as can be said of the universities – but rather to provide these knowledge-intensive services.

Until now, there was no framework for describing and understanding the role and position of these organisations. The Rathenau Institute is publishing this issue of its Facts & Figures series to fill this gap and, in doing so, to draw attention to this vital component of the Dutch knowledge infrastructure.

#### Contents

-	ritorits	
1	Introduction	1
2	Public knowledge organisations	
	as a group	5
3	Selection criteria and roles	6
4	Basic data; income and staffing	9
5	Policy-oriented organisations	13
6	Government laboratories	17
7	TO2 institutes	20
8	Sector-oriented organisations	26
9	Professional research and	
	training organisations	30

The Rathenau Institute promotes the formation of public and political opinion on science and technology. It does this by studying the organisation and development of science systems, publishing about the impact on society of new technologies, and organising debates on issues and dilemmas in science and technology.

Within the context of the 'evidence-based policy' theme identified in its work programme, the Rathenau Institute is studying public knowledge organisations and has decided to publish a series of papers on this topic. The first, entitled *Verstand op veilig*, appeared in 2014. Two more publications will follow in the course of 2016, one concerning the position and role of public knowledge organisations in health matters, and one concerning their position and role in the area of water and water management. These papers will explore the qualitative importance of these organisations for their various stakeholders and the changes that they are facing.

Public knowledge organisations provide five types of knowledge-intensive services: policy support, policy implementation (including statutory tasks), knowledge generation for stakeholders in society (enterprises and public-sector organisations), professional training, and the accumulation and management of essential facilities, data and knowledge. By providing these services, public knowledge organisations take on board tasks that are the responsibility of the national government, for example inoculation against diseases (RIVM), food safety monitoring (DLO), and flood protection (Deltares).

While most of the public knowledge organisations are familiar enough individually, as a group they rarely surface in policy discussions. That is due to their heterogeneous nature. They are not governed by the Higher Education and Research Act [Wet op het hoger onderwijs en wetenschappelijk onderzoek, WHW], but do contribute to the knowledge base for science and research in the Netherlands. Most of them are therefore not governed by the Ministry of Education, Culture and Science, but have their own governing ministry. They are funded – in part – from the public purse, but their relationship to the national government varies. In some cases, they are part of a ministry, but in other cases they operate more autonomously. They are accountable to the national government, but also have many other, equally heterogeneous stakeholders. For example, they must rely on their peers in science and academia to judge the quality of their expertise, but they look to the judgement of the general public and of enterprises to assess their impact on society. They safeguard public values, but also recognise those values as changeable and subject to trends and developments in political discourse.

In this report, we provide some basic data about public knowledge organisations, specifically concerning their funding and staffing. Based on this information, we can state the following.

- In 2014, public knowledge organisations generated a total income of € 2,139 million and employed more than 14,500 FTEs.
- Of that amount, € 1,021 million¹ was in the form of institutional funding, i.e. long-term funding by the national government.² This sum consisted of institutional payments and multi-year programme funding. The organisations do not compete for this funding but have it allocated to them under multi-year agreements that they have concluded with the ministries that support them financially. The funding is intended to maintain the organisations and their facilities, but it is also tied to specific tasks or to a research programme in support of policy that is adopted annually by the relevant ministry in cooperation with the organisations concerned.
- Alongside long-term funding by the national government, public knowledge organisations also compete for funding. This takes the form of contracts with public and private parties, project funding, and/or research funds. A number of organisations also generate income by providing data, licences or other services – for example library memberships, courses, and the leasing out of facilities – for payment.

<sup>1</sup> This amount does not include the income of the Netherlands Institute for Transport Policy Analysis (KiM) or the Foundation for Scientific Education and Research of the Netherlands Defence Academy (SWOON-NLDA). The KiM's financial data is unavailable (part of the budget of the Ministry of Infrastructure and the Environment, I&M). The SWOON-NLDA's data only became available in 2012, and inclusion would distort the overall results when compared with the years before.

<sup>2</sup> This long-term funding cannot be compared to total R&D expenditure as given in the TWIN (Total investment in Research and Innovation) surveys because not all of the long-term funding these organisations receive is linked to research tasks. That means that TWIN figures do not cover the entire amount received in funding.

- Between 2010 and 2014, public knowledge organisations saw their total income drop by 8 per cent (€ 191 million). Institutional funding fell by 7 per cent (€ 79 million). Other sources of income declined by 8.4 per cent (€ 97 million).
- The decline in institutional funding was steepest among public knowledge organisations that combine training and research (19 per cent) and organisations for applied scientific research (the 'TO2' institutes) (14 per cent). Only in the case of government laboratories did institutional funding increase by 3.5 per cent. The exception in this category was Statistics Netherlands (CBS), which saw institutional funding fall by 18 per cent.

Here is a list of the Netherlands' 29 public knowledge organisations.

Name/acronym	Full name
KNMI	Royal Dutch Meteorological Institute
CBS	Statistics Netherlands
RIVM	National Institute for Public Health and the Environment
NLR	Netherlands Aerospace Centre
MARIN	Maritime Research Institute Netherlands
TNO	Netherlands Organisation for Applied Scientific Research
DLO	DLO Foundation
СРВ	Netherlands Bureau for Economic Policy Analysis
ECN	Energy Research Centre of the Netherlands
SWOV	Institute for Road Safety Research
Boekman Foundation	Study centre for arts, culture and related policy*
WODC	Research and Documentation Centre
SCP	The Netherlands Institute for Social Research
Clingendael	Netherlands Institute of International Relations Clingendael
NIVEL	Netherlands Institute for Health Services Research
VeiligheidNL	Foundation for the prevention of accidents*
Police Academy	
Trimbos Institute	Netherlands Institute of Mental Health and Addiction
NFI	Netherlands Forensic Institute
Mulier Institute	Centre for Research on Sports in Society
SWOON-NLDA	Foundation for Scientific Education and Research - Netherlands Defence Academy
KiM	Netherlands Institute for Transport Policy Analysis
Geonovum	National Spatial Data Infrastructure
Movisie	Netherlands Centre for social development
NJi	Netherlands Youth Institute
Vilans	Centre of expertise for long-term care*
Deltares	Institute for applied research in the field of water and subsurface*
PBL	Netherlands Environmental Assessment Agency
(N) IFV	Netherlands Institute for Safety

<sup>\*</sup> Not a name, but a brief description.

Table 1 provides basic data on the 29 public knowledge organisations.

 Table 1
 Basic data on public knowledge organisations in the Netherlands

Name	Founded in**	Governing ministry***/****	Legal status (2015)	Revenue in 2014 (x 1,000)	Number of FTEs (2014)*****
KNMI	1854	I&M	Administrative agency	58,953	354.2
CBS	1899	EZ	ZBO****/RWT	176,593	1,777.0
RIVM	1909	VWS (I&M, EZ)	Administrative agency	*****339,365	1,376.9
NLR	1919	EZ (I&M, Defence)	Foundation	80,153	553.0
MARIN	1929	EZ (I&M, Defence)	Foundation	42,720	366.0
TNO	1932	EZ (I&M, Defence, SZW)	ZBO/RWT	424,192	2,736.0
DLO	1938	EZ	Foundation/RWT	330,061	2,496.0
СРВ	1945	EZ	Policy assessment agency	14,846	140.7
ECN	1955	EZ (I&M)	Foundation	76,164	450.0
SWOV	1962	I&M	Foundation	5,684	42.4
Boekman Foundation	1963	OCW	Foundation	*****1,168	7.9
WODC	1973	V&J	Ministerial	11,536	94
SCP	1973	VWS	Policy assessment agency	******11,133	82.6
Clingendael	1983	BuZa	Foundation	9,700	*69.7
NIVEL	1985	VWS	Foundation	15,344	156.7
VeiligheidNL	1985	VWS	Foundation	6,031	41.8
Police Academy	1992	V&J	ZBO/RWT	179,735	1,485.4
Trimbos Institute	1996	VWS	Foundation	17,895	164.0
NFI	1999	V&J	Administrative agency	75,335	516.8
Mulier Institute	2002	VWS	Foundation	1,946	18.9
SWOON-NLDA	2005	Defence	Foundation/RWT	13,669	118.0
KiM	2006	I&M	Ministerial	-	25.5
Geonovum	2007	I&M (EZ)	Foundation	4,150	13.4
Movisie	2007	VWS	Foundation	14,441	121.3
NJi	2007	VWS	Foundation	14,327	96.1
Vilans	2007	VWS	Foundation	31,005	140.0
Deltares	2007	EZ	Foundation	104,082	745.0
PBL	2008	I&M	Policy assessment agency	30,200	218.0
(N)IFV	(1996) 2013	V&J	ZBO/RWT	*****62,530	210.0

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Sources: websites (all organisations); annual reports (CBS, Clingendael, DLO (WUR), ECN, Mulier Institute, (N)IFV, NFI, NJi, RIVM, SCP, SWOV, TNO, VeiligheidNL, Vilans); annual accounts (Boekman Foundation, NLR, Police Academy, Trimbos Institute, VeiligheidNL); financial reports (Movisie); information requested (CPB, Deltares, MARIN, NIVEL, PBL, SWOON-NLDA, WODC); annual report and Final Budget Act of the Ministry of Infrastructure and the Environment (KNMI), Klein Haarhuis, Hagen & Scheepmaker, 2009; Klinkert, 2011, list of national administrative agencies; Tops & Van der Wal, 2010; register of independent administrative bodies.

- \* The number of FTEs is based on data in previous years.
- The information in the column 'Founded in' indicates when the organisations were established in their present form. Some organisations are the outcome of a merger between older organisations.
- TIn parentheses and italicised: ministries that provide the organisation with long-term programme funding in addition to the funding allocated by the governing ministry.

\*\*\*\* See Appendix C for a clarification of the acronyms.

- \*\*\*\*\* The CBS (Statistics Netherlands) does not have the status of a ZBO (Independent administrative body); instead, this status has been granted to the director-general of the CBS and the Central Commission for Statistics (CCS), which has oversight.

  \*\*\*\*\* This is both permanent and temporary staff. The current data collection does not allow us to distinguish between the two.
- \*\*\*\*\*\*\* A number of organisations manage money that is spent by or on behalf of others:
  - The RIVM (National Institute for Public Health and the Environment) uses a portion of its income for coordination (see Appendix A), for example of the National Immunisation Programme and screening programmes. The RIVM does not spend this money itself, but distributes it to the organisations that actually carry out the programmes.
  - The Boekman Foundation receives € 160,000 to organise and present the Johannes Vermeer Award. Of that amount, € 100,000 is award money.
  - From 2010 to 2014, the SCP (Netherlands Institute for Social Research) received funding for the RMO (Dutch Council for Social Development), whose secretariat was administered by the SCP.
  - The (N)IFV (Netherlands Institute for Safety) uses some of its funding to procure and manage material, equipment and telecommunications facilities for the police force and safety regions.

# 2 Public knowledge organisations as a group

Traditionally, government has been responsible for such public domains as public order and safety, health care, housing, social security, education, and science. In order to perform satisfactorily in these areas, it needs knowledge. In the course of time, that knowledge and the research on which it is based have become institutionalised in specific organisations (see Table 1). These organisations constitute a heterogeneous group within the Dutch knowledge infrastructure. They perform different roles: they monitor trends in society, evaluate policy, make existing knowledge comprehensible and accessible, raise the alarm in disasters, provide public information, and help businesses innovate. There is – as yet - no overarching, generally accepted name for these organisations.3 We call them 'public knowledge organisations' - 'public' because they are to some extent publicly funded and 'knowledge organisations' to acknowledge their broader knowledge-related tasks.

They differ from universities and the research institutes of the Royal Netherlands Academy of Arts and Sciences (KNAW) and the Netherlands Organisation for Scientific Research (NWO) because they combine scientific research with knowledge-intensive services4 that they offer to government, the business community, the general public, and non-profit organisations. They contribute in this manner to government policymaking, carry out traditional government tasks, or safeguard a number of public values and services for which government is responsible.

Viewed from this vantage point, we can identify various reasons for their existence as public knowledge organisations (see e.g. Blankesteijn et al., 2014). First of all, they play a role with regard to emergencies, for example by monitoring food safety, preventing infectious diseases, and issuing extreme weather warnings. Second, they compensate for the failure of the market by rendering services that would otherwise not be available or only to a limited extent if government did not intervene. Third, these organisations guarantee the continuity of a stable knowledge base that may help solve the problems faced by society, both now and in the future.<sup>5</sup>

For example, they contribute to food safety and help solve crimes. They also see to it that the knowledge they have amassed is disseminated, so that, for example, new information about the effectiveness of medical treatments gained in the Province of Zeeland is shared with medical practitioners at the other ends of the country, in the Province of Friesland or the Province of Limburg. They also make possible innovations whose development has not been undertaken by the commercial market, for example because of their high-risk nature. And they ensure that policymakers have access to the most recent scientific discoveries and societal trends, both in the short and the long term.

In recent decades, however, there has been mounting discussion of what a government task is, when the market has failed, and when these organisations should be charged with the associated tasks. This has led to changes in the way public knowledge organisations are organised and managed (see e.g. OECD, 2011; Blankesteijn et al., 2014). The 'new public management' philosophy, for example, has led to a rise in demand-driven research: government ministries present themselves as clients and a growing share of the structural funding that public knowledge organisations receive is tied to specific contracts. Public knowledge organisations are also encouraged to compete for funding more than in the past, for example by focusing more of their efforts on the commercial market.

In addition, public knowledge organisations must also respond to changes in their environment. The emergence of private organisations offering what were previously public services (for example in meteorology), new issues facing society, changes in government policy, and the growing role of valorisation at universities can all give rise to discussion about the role and position of public knowledge organisations.

<sup>3</sup> A recent development was the creation of the 'network of government knowledge-based institutions and policy assessment agencies'a partnership between 'eight government knowledge-based institutions and three policy assessment agencies, all working in the public service on public tasks'. The organisations that make up this network overlap with our selection to some extent, but to some extent they do not. The aim of this publication is therefore to contribute to the public discourse about the nature and role of this type of knowledge-based institution.

<sup>4</sup> UNESCO differentiates between research and development, scientific and technological education, and training and scientific and technological services (UNESCO, 1978; OECD, 2002, Frascati manual).

<sup>5</sup> See e.g. Arnold, Barker & Slipersaeter, 2010; Ministerie van Economische Zaken, 2013; Blankesteijn et al., 2014.

These questions are complicated by the huge variety of tasks and the heterogeneity of the stake-holders for which public knowledge organisations work. Can a public knowledge organisation focus more on industry and still maintain the independence needed to carry out its public tasks? Will there be enough leeway to carry out these public tasks at all? Does the emergence of private parties mean that some tasks no longer need to be regarded as public tasks?

To answer these and many other questions, we need to understand the added value of this group of organisations for society. Until now, however, the Netherlands has not had a transparent policy framework that can be used to describe and understand how public knowledge organisations operate and why they are important. To date, they have also been almost invisible in research policy. The Rathenau Instituut wishes to help develop a framework of this kind. The current publication supports this aim by presenting basic data on public knowledge organisations as a group, so that it becomes clear who they are and what they do.

#### 3 Selection criteria and roles

What all public knowledge organisations have in common is that they carry out research. Their research efforts are not, however, driven primarily by scientific curiosity, but by specific missions. Curiosity is therefore not the starting point of their research; their research results are always geared towards the requirements of stakeholders in government, enterprise and society. To meet these requirements, they publish reports (online), appear in the media, organise symposia and public events, and communicate with their peers in academia, for example by publishing in peer-reviewed journals.

We have identified 29 public knowledge organisations<sup>7</sup> (see Table 1) based on the following five criteria:

- 1. It is a 'brick and mortar' organisation, i.e. an organisation that occupies an actual building, and not a 'virtual' organisation.
- 2. The organisation is not part of the academic research world made up of universities and university medical centres (UMCs) and the research institutes belonging to the Netherlands Organisation for Scientific Research (NWO) and the Royal Netherlands Academy of Arts and Sciences (KNAW).
- 3. The organisation's main task is to conduct research or amass knowledge. It combines that task with knowledge-intensive services.
- 4. The organisation operates in the public domain and helps at least one government ministry meet its demand for knowledge and/or shoulder its responsibilities.
- 5. The organisation hence has a systematic relationship with at least one ministry, in the sense that:
  - a. it receives long-term funding from at least one ministry, and
  - b. at least one ministry influences the organisation's activities. That influence may be limited to the research programme tied to the funding, but it can also extend to the execution of statutory tasks and the associated accountability mechanisms.

Appendix B lists the organisations that we considered but ultimately did not include in our selection.

<sup>6</sup> Note that a policy framework does exist for some subgroups of public knowledge organisations. For example, the policy assessment agencies operate in accordance with the 'Protocol for the Policy Assessment Agencies' [Aanwijzingen voor de Planbureaus], and the policy framework for the TO2 institutes has been set out in the 'Strategic Agenda for Applied Research' [Visie op het toegepast onderzoek] (Ministerie van Franchische Zaken 2013)

<sup>7</sup> Earlier studies on the public, non-university knowledge infrastructure identified 110 non-university knowledge organisations (Speelman and Angelino, 2006; Speelman and Maas, 2010). In 2006, Statistics Netherlands (CBS) collected data on a comparable group (Meinen and Meurink, 2006). In 2009, the Rathenau Institute published a Facts & Figures report about this group (Van Steen, 2009). In that publication, the group was more narrowly defined and TNO and DLO were regarded as a single organisation.

The criterion that a public knowledge organisation must have research or knowledge accumulation as one of their main tasks means that we must exclude a number of organisations that conduct research but do so in addition to or in the service of their primary tasks. The biggest group excluded in this manner consists of the advisory councils and inspectorates. Also excluded are museums, the National Library of the Netherlands, and executive agencies (for example Rijkswaterstaat, the Dutch government's public works agency).

At the same time, however, we have broadened the field by referring to knowledge organisations, rather than research organisations. This semantic distinction acknowledges that the research that these organisations carry out is not always strictly scientific in nature. This allows us to include organisations that do less (scientific) research themselves, but:

- mainly use knowledge that is retrieved from external sources, such as Movisie;
- compile and make statistics publicly available, such as Statistics Netherlands (CBS).

They combine research and knowledge-intensive services. We can divide such knowledge-intensive services into five categories based on the role that they fulfil (see Table 2):

- Policy support: research that delivers the information and knowledge needed to develop, implement, and evaluate policy (note that implementation includes practical support and oversight).
- Policy implementation: research that helps government perform its tasks, for example purchasing vaccines and securing food safety. A number of these tasks have been established by law and are thus defined as statutory research tasks.
- Knowledge generation for stakeholders: research and knowledge used to support and improve the work of stakeholders in trade and industry, in public organisations and in civil society. There are two ways that this can happen:
  - R&D/innovation support: helping enterprises and other organisations develop innovations.
  - professional platform: providing a platform for knowledge-sharing and co-creation between professionals.
- Accumulation and management of facilities, data and knowledge: ensuring that knowledge, data and/or large-scale research facilities are and remain available in the most efficient way possible.
- Professional training: offering training and courses for professionals at different points in their career, focusing on specific occupations.

Table 2 shows which of the five roles each of the 29 public knowledge organisations fulfils.

**Table 2** Knowledge-intensive services provided by public knowledge organisations in the Netherlands

			Role as knowle	dge-intensive s	ervice provide	r*	
Name	Policy	Policy implemen- tation		e generation for facilities ders in society facilities		n and mgt of large-scale data mgt, ctions)	Professional
Name	support		R&D/ innovation	Professional platform	Facilities	Collection and/or data manage- ment	training
KiM***	X					X	
WODC	X					Х	
СРВ	Х						
SCP	Х						
PBL	Х						
KNMI	Х	Х	Х	Х	Х	Х	Х
NFI		Х	Х			Х	Х
RIVM	Х	Х	Х	Х	Х	Х	Х
CBS	Х	Х		Х		Х	
(N)IFV	Х	Х		Х	Х	Х	Х
Deltares***	Х		Х	Х	X		Х
DLO	Х	х	Х	Х	Х		
ECN	Х		Х		Х		
MARIN***	Х		Х		Х		Х
NLR	Х		Х		Х		
TNO	Х	Х	Х	Х	X	Х	
Boekman Foundation***				×		×	
X Geonovum***	Х		Х	X			
Movisie***	Х		Х	X		X	Х
Mulier Institute***	Х					X	
NJi***	Х		Х	X		X	Х
NIVEL***	Х			Х		X	
SWOV	Х			Х		X	
Trimbos Institute***	Х		Х	Х		X	Х
VeiligheidNL***	Х		Х	Х		X	Х
Vilans***	Х		Х	Х		X	
Clingendael***	Х			Х			Х
Police Academy	Х			Х		Х	Х
SWOON-NLDA	Х						Х

\* Where possible, role identification has been based on tasks laid down in legislation or a regulatory framework. In a number of cases where tasks are set out in legislation or a regulatory framework, we decided to add other tasks based on information on the organisation's website (KNMI, RIVM, NFI, MARIN, Deltares, TNO and SWOV).

<sup>\*\*</sup> In the case of the TO2 institutes (Deltares, DLO, ECN, MARIN, NLR, TNO), we not only looked at their own regulatory context and website but also considered three tasks identified by the Ministry of Economic Affairs in its Strategic Agenda for Applied Research [Visie op het Toegepast Onderzoek] (see also p. 25 of this report).

<sup>\*\*\*</sup> No legislation or regulatory framework was available defining these organisations' roles. We have therefore based our description on the content of their websites. We did find references to Movisie, NJi and Vilans in the 2006 Annual Report and Final Budget Act of the Ministry of Health, Welfare and Sport, List of Questions and Answers (2007), but the description was insufficient for our purposes.

# 4 Basic data: income and staffing

For the purposes of this publication, we have collected income data on all 29 public knowledge organisations between 2010 and 2014, based on their own annual reports and annual accounts and those of the national government. Where this information was unavailable, we contacted the organisation directly.

For the classification of income, we follow the method used in our TWIN reports (Total Investment in Research and Innovation), which distinguishes between institutional funding and project or programme funding (Van Steen, 2015). Institutional funding consists of funding that the national government allocates to organisations without this being 'earmarked for any specific projects or programmes' or obtained in competition with others.

Project or programme funding refers to funding tied to specific research projects and obtained in competition with others. Such projects are 'subject to scope, budget and time restrictions'.

A grey area is made up of demand-driven funding: funding associated with multi-year programmes, but not obtained in competition with others. These sums have been categorised as institutional funding.

By making this distinction, we were able to understand how much of the funding of public knowledge organisations is recurring and how much is non-recurring. We also tried to understand the relationship between their public and private clients. That turned out to be impossible with the available data, mainly because many public knowledge organisations do not make this distinction in their reports. As far as possible, we have differentiated between contract research for the national government and for other parties. That allows us to group sources of income into the following three categories:

- Institutional funding: structural funding provided by the national government. This includes the budget allocated by the responsible ministry (for example a government contribution or an institutional subsidy) and recurring annual programme funding not obtained in competition with others., Which projects will be undertaken within this programme funding is determined in consultation with the partners involved.
- Project funding: income from contract research frequently obtained in competition with others. This publication makes the following distinction:
  - · Contract research for the national government: research commissioned by the national government, whether or not obtained in competition with others.
  - Contract research: income generated from research carried out for public and private parties, not including the national government, and obtained in competition with others. This includes research funding awarded by the European Union obtained in competition with others.
- Other income: income that is not associated directly with research or knowledge-intensive services, for example licence-related income.

The public knowledge organisations do not all have the same legal status. They also differ with respect to sources of funding and the way in which they report about their funding. delineate this funding. In the present report, we have divided the public knowledge organisations into five groups based on similarities in the roles that they fulfil (see Table 2). A quick glance at this table immediately shows that these are not homogenous groups: even within the individual groups, the roles they have been allocated and how they fulfil them differ from one organisation to the next (see Appendix A).

Nevertheless, our classification into five groups makes practical discussion of the 29 organisations possible, because organisations with similar roles often occupy similar positions vis-à-vis the national government (see Figure 1) and rely on the same sources of income. Table 3 lists their sources of income and into which of the three aforementioned funding categories those sources fall.

 Table 3
 Income of public knowledge organisations by group

		Institutional funding	Contract research for national government	Contract research
Policy- oriented organisations	Policy assessment agencies	Budgetary funding: sourced from ministerial budgets, decentralised government budgets, and multi-year contract research. These are budgets that scarcely vary over the course of a longer (multi-year) period.  SCP: basic budget from the Ministry of VWS.	Project income (SCP).  Short-term contracts (including contract research): most clients are part of national government (see e.g. Kamerbrief over de motie-Koopmans/Planbureaus, 2009).	-
	WODC	Budget from the Ministry of V&J.	Other income.	-
Government laboratories	Administrative agencies and Statistics Netherlands	Revenue from governing ministry: this is a basic budget ('agency funding' (KNMI), funding as owner (RIVM)) and research contracted by governing ministry.*	Revenue from other ministries (including long-term funding for RIVM from the Ministries of I&M and EZ).	Third-party revenue.  This includes contract research financed externally and payments made for performing specific tasks, including:  RIVM: expense claims for implementing the National Immunisation Programme  KNMI: aviation-related income  CBS and KNMI: income from supply of data and licences.
	IFV	Government contribution.	-	Funding/joint tasks (work for safety regions), and revenue from products delivered (contract activities for third parties).
TO2 institutes	Deltares, DLO, ECN, NLR and TNO	Government contribution (for knowledge base, statutory research tasks and funding within the Top Sectors/Societal Themes programme) and programme funding** from various ministries (EZ, Defence and I&M).  DLO's funding is in accordance with its grant scheme.  Deltares does not receive programme funding.  NLR receives programme funding and maintenance funding (in accordance with the grant scheme).	Research contracted by government (national government) on a project basis.	Other contract research, including international.
	MARIN	Government contribution (for knowledge base and funding within the Top Sectors /Societal Themes programme) and programme funding** from the Ministry of Defence.	-	Contract research (including for the national government).

Sector- oriented organisations	Boekman Foundation, Geonovum, Movisie, Mulier Institute, NJi, Trimbos Institute and Vilans	(Institutional) subsidy.**  Annual funding award from governing ministry.  Geonovum: funding award from Ministries of I&M, EZ, the Land Registry and TNO.	Project funding from a governance body <sup>8</sup> Trimbos Institute and the Boekman Foundation: only project funding sourced from national government (including ZonMw).  Geonovum: 'payment for delivery of services'.  Mulier Institute: 'other contracts with VWS'.	Contract research for third parties.  Trimbos Institute and the Boekman Foundation: including project funding not sourced from government bodies
	NIVEL, VeiligheidNL and SWOV	(Institutional) subsidy.**  Annual funding award from governing ministry.	-	Contracts awarded by third parties and project funding.
Professional research and training organisations	Clingendael Police Academy and NLDA	Clingendael: basic budget and multi-year programme.  NLDA: subsidy and funding from the Ministry of Defence.  Police Academy: 'general funding'.	Police Academy: 'special funding' for R&D.	Clingendael: project income.  Police Academy 'other payments', not necessarily related to research.  NLDA: contract research.

Sources: annual reports (CBS, Clingendael, DLO (WUR), ECN, Mulier Institute, (N)IFV, NFI, NJi, RIVM, SCP, SWOV, TNO, VeiligheidNL, Vilans); annual accounts (Boekman Foundation, NLR, Police Academy, Trimbos Institute, VeiligheidNL); financial report (Movisie); information requested (CPB, Deltares, MARIN, NIVEL, PBL, SWOON-NLDA, WODC); Annual report and Final Budget Act of the Ministry of Infrastructure and the Environment (KNMI).

- The reporting method prevents us from dividing funding into long-term and contract-related funding by the governing ministry.

  All programme funding (TO2 institutes) and (institutional) subsidies (sector-related organisations) are tied to a programme or specific tasks identified in consultation with the ministry.

The 29 public knowledge organisations had a joint income in 2014 of € 2,139° (see Table 4). Of that amount, € 1,021 million consisted of institutional funding provided by the national government. The rest they obtained under contract to the national government and others. As Table 4 shows, total income declined by 8 per cent (€ 191 million) between 2010 and 2014. Institutional funding provided by the national government fell by 7 per cent (€ 79 million), and project funding by 8.4 per cent (€ 97 million).

Income of public knowledge organisations between 2010 and 2014 (in millions of euros)\*

Year	Total income	Institutional funding	Project funding	Other
2010	2,330	1,101	1,143	86
2011	2,352	1,120	1,136	95
2012	2,321	1,110	1,118	92
2013	2,255	1,053	1,090	111
2014	2,139	1,021	1,047	71

<sup>\*</sup> Excluding KiM, for which financial data was unavailable, and excluding SWOON-NLDA, for which data on 2010 and 2011 was unavailable; inclusion of the latter organisation would have distorted the

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More than 50 percent of this income belongs to the six organisations for applied research (the 'TO2 institutes'). The largest group - the sector-oriented organisations - account for only 8 per cent of the income. Figure 1 indicates the financial size of the five groups of public knowledge organisations, their proximity to the governing ministry, and their primary role.

In 2014, the policy-oriented organisations employed 548 FTEs; the government laboratories employed 4,234 FTEs; the TO2 institutes employed 7,346 FTEs; the sector-oriented organisations employed 803 FTEs; and the professional research and training organisations employed 1,675 FTEs; together this amounts to 14,606 FTEs.

Excluding KiM, for which financial data was unavailable, and excluding SWOON-NLDA, for which data for 2010 and 2011 was unavailable; inclusion of the latter organisation would have distorted the results.

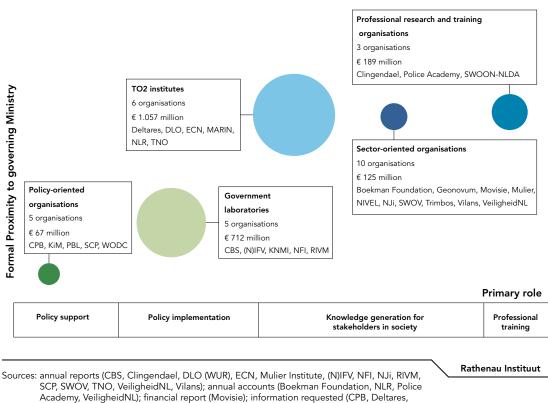


Figure 1 Size of public knowledge organisations by role category

MARIN, NIVEL, PBL, SWOON-NLDA, WODC); Annual report and Final Budget Act of the Ministry of Infrastructure and the Environment (KNMI).

# 5 Policy-oriented organisations

Of all the public knowledge organisations, the policy-oriented organisations (policy assessment agencies and ministerial knowledge organisations) are in closest proximity to their governing ministry in terms of organisational and operational matters. They are part of the relevant ministry's organisation, but have an independent status that guarantees their autonomy in scientific matters. Two arrangements play a key role in that regard. In the first place, ministries are not permitted to interfere with the research methods used or with the contents of the organisation's research reports. Second, the views of these organisations do not necessarily need to reflect those of the responsible minister or state secretary.10

The Netherlands has three policy assessment agencies and two ministerial knowledge organisations (see Table 5). In terms of their organisation and work, the policy assessment agencies are subject to the 'Protocol for the Policy Assessment Agencies' [Aanwijzingen voor de Planbureaus] (2012). Although they are part of a specific ministry organisationally speaking, they work across sectors and ministries for the entire national government. They use their particular expertise to analyse issues that have been raised in different ministries and other parts of the national government. Their work programme is therefore discussed by the entire Council of Ministers.

The WODC and the KiM, on the other hand, focus on one specific sector and, as a result, mainly analyse issues that have arisen in their own governing ministry. Their work programme is adopted in consultation with the governing ministry and the relevant minister and state secretary.

 Table 5
 Origin of policy-oriented organisations

Name	Acronym	Founded	Background	Governing ministry
Netherlands Bureau for Economic Policy Analysis	СРВ	1945		EZ
Netherlands Institute for Social Research	SCP	1973		VWS
Research and Documentation Centre	WODC	1973	Successor to the Study and Documentation Centre [Studie- en Documentatiecentrum] of the Directorate of Prisons (founded in 1949)	V&J
Netherlands Institute for Transport Policy Analysis	KiM	2006		I&M
Netherlands Environmental Assessment Agency	PBL	2008	Merger between the Netherlands Institute for Spatial Research (RPB)] (founded in 2002) and the Environmental Assessment Agency [Milieu- en Natuurplanbureau (MNP)] (founded in 2006)	I&M

Sources: websites (CPB, KiM, PBL, SCP); Klein Haarhuis, Hagen & Scheepmaker, 2009.

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What typifies all these organisations is their overriding focus on policymaking. They analyse and propose new policy options, answer questions posed directly by ministries, and analyse and chart the consequences of government policy. Their research is therefore meant to support and evaluate the policy of the national government.

The three policy assessment agencies, for example, map out the consequences (real and potential) of government policy, each in its own domain. They do this by analysing and estimating the effects of policy and by monitoring and charting trends and developments in society, both in the shorter and the longer term. They do this for ministries, but also for the Senate and House of Representatives, political parties, and national and international public organisations. The Netherlands Environmental Assessment Agency (PBL) covers the full spectrum of the physical living environment, from the natural world to housing and from environmental issues to spatial planning; the Netherlands Bureau for Economic Policy Analysis (CPB) looks at economic trends and budget analyses; the Netherlands Institute for Social Research (SCP) concentrates on socio-economic trends, and therefore on care, education, Dutch culture and work.

The Research and Documentation Centre (WODC) conducts and outsources research for the Ministry of Security and Justice. Finally, the Netherlands Institute for Transport Policy Analysis (KiM) conducts applied research and provides access to mobility-related knowledge generated elsewhere; in doing so, it contributes directly to the policymaking process at the Ministry of Infrastructure and the Environment. See Appendix A for more details about these five policy-oriented organisations.

The organisations differ considerably in size (see Table 6). The PBL is the largest of the policy assessment agencies, for example, and more than eight times the size of the smallest organisation, the KiM. In total, these organisations employ 548.5 FTEs. Total staff has decreased since 2010 by 21.9 FTEs. Most of the decline has been at the WODC (-15 FTEs) and the SCP (-10 FTEs).

These organisations also constitute a separate group in terms of operational management. They are subject to the national government's budgetary rules and are therefore unable to build any reserves as organisations. It is more difficult for them to distribute their income over multiple years. They must also

comply with the national government's public procurement rules when outsourcing work to others, and their permanent staffing is subject to a pre-determined staff complement. These figures are adjusted annually, often downwards. The only way to ensure that the work gets done is to replace permanent staff with temporary employees. If this situation goes on for years at a time, it affects management's ability to rejuvenate the permanent staff. We can best describe the situation of the policy assessment agencies as independent in terms of content but dependent in terms of management.

Table 6 Size of policy-oriented organisations in 2014 (income in thousands of euros)

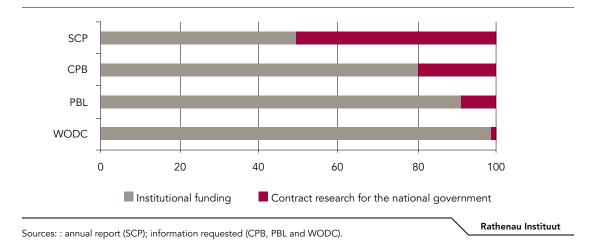
Name	No. of FTE's	Income
PBL	218.0	30,200
СРВ	140.7	14,846
SCP	82.6	*11,133
WODC	94	11,536
KiM	25.5	**_

Sources: annual report (SCP); information requested (CPB, PBL and WODC).

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Figure 2 shows the sources of income of the four policy-oriented organisations for which we have financial data. These organisations receive almost all their income from the national government. Even the project funding is provided largely by organisations within the national government. In the case of the policy assessment agencies, 80 per cent of their income must be financed from the budget, 12 i.e. from the ministerial budgets, decentralised government budgets or multi-year projects. We therefore categorise that income as institutional funding. These arrangements apply across the board for two of the three policy assessment agencies, but for the SCP only since 2015.<sup>13</sup>

Figure 2 Sources of income of policy-oriented organisations in 2014, as a percentage of total income



12 Aanwijzingen voor de Planbureaus (2012), §4, 10,

Income includes payment for the RMO, whose secretariat was administered by the SCP from 01-04-2010 to 31-12-2014.

No financial data available.

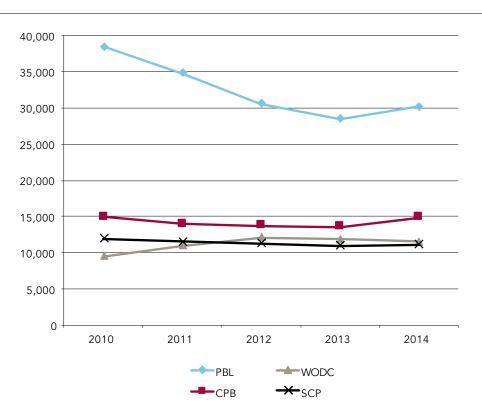
<sup>13</sup> Kamerbrief betreffende de motie-Koopmans/planbureaus: 06-04-2009; Kenmerk: 2009-0000197162.

Figure 3 shows trends in income for the policy-oriented organisations. Between 2010 and 2014, the PBL's income fell by 21.6 per cent (€ 8.3 million). Both institutional funding and income derived from contract research for the national government declined in this period by respectively 16.4 per cent and 51.8 per cent. The increase in 2014 can be ascribed entirely to a rise in contract research for the national government, after a fallow year in 2013.

Institutional funding fell at the other two policy assessment agencies (7.8 per cent at the CPB and 10.7 per cent at the SCP). The SCP's total income dropped by 7.1 per cent owing to a parallel decline in contract research for the national government. For the CPB, the fall in institutional funding was compensated by a rise in contract research, bringing its income in 2014 up to 2010 levels.

Only the WODC saw a rise in its institutional funding in this period (by 21 per cent). The WODC was assigned new tasks starting in 2011. A reshuffle among the ministries meant that research concerning police work and security was allocated to the WODC. After 2012, its income once again declined.

Figure 3 Trends in income for policy-oriented organisations, 2010-2014 (income in thousands of euros)



Sources: annual report (SCP); information requested (CPB, PBL and WODC).

#### 6 Government laboratories

In this chapter we discuss five public knowledge organisations that we have defined as government laboratories, based on the role that they play. Their set of tasks consists largely of implementing knowledge-intensive government tasks (see Table 4). The Netherlands Forensic Institute (NFI) carries out forensic research. The Royal Netherlands Meteorological Institute (KNMI) issues general weather forecasts and warnings, performs seismological tests and issues reports, and manages the meteorological and seismological infrastructure of the Netherlands. The National Institute for Public Health and the Environment (RIVM) monitors food and drugs, coordinates the National Immunisation Programme, coordinates screening programmes, combats infectious diseases, and conducts onsite tests during incidents and disasters. The Netherlands Institute for Safety (IFV) supplies the different safety regions with the necessary knowledge and materials, and Statistics Netherlands (CBS) produces official national statistics on behalf of and for the national government. These tasks require specific knowledge that the above organisations generate. In all five cases, the tasks of these government laboratories are enshrined in the law14 law14 (see Table 7). That is why the two organisations that do not fall under the national government in organisational terms (CBS and (N)IFV) are legal persons with statutory tasks (RWTs). See Appendix 3 for more information on the work of the individual organisations.

Table 7 Origin of government laboratories

Name	Acronym	Founded	Statutory basis	Legal status	Governing ministry
Royal Netherlands Meteorological Institute	KNMI	1854	KNMI Act (since 2001) <sup>15</sup>	Administrative agency	I&M
Statistics Netherlands	CBS	1899	Statistics Netherlands Act (since 2003)	ZBO¹6/RWT	EZ
National Institute for Public Health and the Environment	RIVM	1909	RIVM Act (since 1996)	Administrative agency	vws
Netherlands Forensic Institute	NFI	1999	Decree on NFI Tasks	Administrative agency	V&J
(Netherlands) Institute for Safety	(N)IFV	(1996) 2013 <sup>17</sup>	Dutch Safety Regions Act (since 2013)	ZBO/RWT	V&J

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Sources: websites (CBS, KNMI, NFI, RIVM); Regeling taken NFI (2012); Wet op het Centraal Bureau voor de Statistiek (2003); Wet op het Koninklijk Nederlands Meteorologisch Instituut (2001); Wet op het RIVM (1996); ZBO-register (http://almanak.zboregister.overheid.nl); Overzicht agentschappen Rijksoverheid (https://www.rijksoverheid.nl/onderwerpen/rijksoverheid/ inhoud/ agentschappen/lijst-agentschappen); Tweede Kamer, 1995/96 24454, no. 3; Tweede Kamer. 2010/11, 32 841, no. 3.

<sup>14</sup> The new Meteorology and Seismology Tasks Act [Wet Taken Meteorologie en Seismologie] came into force on 1 January 2016. This act replaces the KNMI Act and spells out the Minister of I&M's duty of care with regard to meteorology and seismology. The tasks that the KNMI is obliged to carry out in this regard have been laid down in a Ministerial Decree, which also became effective on 1 January 2016.

<sup>15</sup> As of 1 January 2016: Meteorology and Seismology Tasks Act [Wet Taken Meteorologie en Seismologie] and underlying Ministerial Decree.

<sup>16</sup> The two governance bodies of the CBS (the director-general for statistics and the Central Commission for Statistics (CCS)) are independent administrative bodies (ZBO).

<sup>17</sup> The Safety Institute was the result of a 2013 merger between the Netherlands Institute for Safety (NIFV) and the Netherlands Bureau of Fire Services Exams (NBBE). A number of tasks charged to the Ministry of Security and Justice – the National Disaster Response Facility (LFR) and National Management Development for the Fire Brigade Services (LMD-Brandweer) – have been entrusted to this new organisation (Tweede Kamer. 2010/11, 32841, no. 3).

Size of government laboratories in 2014 (income in thousands of euros) Table 8

Name	No. of FTE's	Income
RIVM	1,376.9	*339,365
CBS	1,777.0	176,593
NFI	516.8	75,335
KNMI	354.3	58,953
IFV	210.0	**62,530

Sources: annual reports (CBS, NFI, IFV, RIVM); Annual report and Final Budget Act of the Ministry of Infrastructure and the Environment (KNMI); website ((N)IFV); information requested (KNMI). Rathenau Instituut

- The RIVM uses a portion of its income for coordination purposes (see Appendix A), for example of the National Immunisation Programme and screening programmes. The RIVM does not spend this money itself, but distributes it to the organisations that carry out the programmes.
- The IFV uses some of its funding to procure and manage materials, equipment and telecommunications facilities for the police force and safety regions (see Wet veiligheidsregio's, Art. 68:1).

Table 8 shows how the five government laboratories differ in size. In total, these five organisations employ 4,234.9 FTEs. Almost 75 per cent of these employees work for the CBS (1,777 FTEs) and the RIVM (1,376.9 FTEs). The (N)IFV is the smallest of the five, with only 210 FTEs.

Figure 4 shows the sources of income n 2014. The NFI and the CBS receive almost 90 per cent of their income from their governing ministry (institutional funding), the RIVM and the (N)IFV less than half. It should be noted that in the case of the RIVM, some of the income classified as contract research has also been provided by its governing ministry. As is the case for the other government laboratories, not all of the activities classified as contract research actually involve research; some are implementationrelated, such as the National Immunisation programme (RIVM) or the management and delivery of firefighters' uniforms ((N)IFV).

Figure 4 Sources of income of government laboratories in 2014 as a percentage of total income

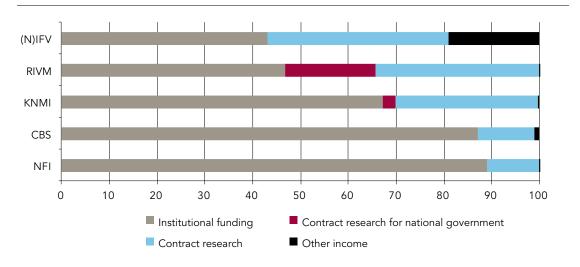


Figure 5 shows trends in income for the government laboratories between 2010 and 2014.

Two organisations saw their income decline between 2010 and 2014: the RIVM by 5.4 per cent and the CBS by 15.7 per cent. The drop in income at the CBS was caused largely by a € 35 million (18.5 per cent) shortfall in revenue at the governing ministry. The decline at the RIVM involved income from contract research (including the expense claim for carrying out the National Immunisation Programme, PKU screening and special diagnostics), which fell by 30.1 per cent. One major reason for the decline is the fact that in 2010, the RIVM received € 28.6 million for providing accommodation services to the NVI and the PBL. That source of income ceased in 2014. The income that this organisation received from its governing ministry increased by 21.1 per cent.

The IFV's income increased by 79.9 per cent. That is largely because institutional funding rose by € 20 million (288.9 per cent). That rise is related to the additional tasks with which the (N)IFV was charged in 2013, turning it into a new organisation as of that year (see Appendix A).

The KNMI's income has remained stable. The NFI's income increased by 6.8 per cent, thanks to its almost doubling the amount received for contract research (a rise of € 3.9 million). Whereas contract research represented almost 11 per cent of its income in 2014 (see Figure 4), it accounted for only 6 per cent of total income in 2010. In contrast, the share of contract research has declined at the other organisations: by 8.5 per cent at the KNMI, by 10.5 per cent at the RIVM, and by 13 per cent at the (N)IFV.

450,000 400,000 350,000 300,000 250,000 200,000 (N)IFV **KNMI** 150,000 100,000 50,000 0 2010 2011 2012 2013 2014

Figure 5 Trends in income for the government laboratories, 2010-2014 (in thousands of euros)\*

Sources: annual reports (CBS, NFI, IFV, RIVM); Annual Report and the Final Budget Act of the Ministry of Infrastructure and the Environment (KNMI);

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The 2012 data on the (N)IFV are based on the 2011 data.

# 7 TO2 institutes

In terms of their financial scale, the organisations that carry out applied research ('TO2 institutes') are the largest group within the category of public knowledge organisations. More than half of the total income of public knowledge organisations comes from these six organisations. Each one has a long history (see Table 9). In 2010, they joined forces in the TO2 Federation. In 2011, the Ministry of Economic Affairs was made responsible for all TO2 institutes. That means that they receive their institutional funding from and are held accountable by this ministry. Since that year, policymakers have regarded them as a single group.

Table 9 Origin of TO2 institutes

Name	Acronym	Founded	Original name	Legal status
Netherlands Aerospace Centre	NLR	1919	Government Service for Aeronautical Studies (RSL)	Foundation
Maritime Research Institute of the Netherlands	MARIN	1929	Dutch Shipbuilding Testing Facility	Foundation
Netherlands Organisation for Applied Scientific Research	TNO	1932		ZBO/RWT
DLO (Agricultural Research Service)	DLO	1938	Agricultural Research Service	Foundation/ RWT
Energy Research Centre of the Netherlands	ECN	1955	Reactor Centre Netherlands	Foundation
Deltares	-	2007	Merger between GeoDelft, WL Delft Hydraulics, Specialist Services Transport and Waterways and parts of TNO Construction and Substratum	Foundation

Sources: websites (MARIN, ECN, NLR, TNO, DLO (WUR)); Tweede Kamer, 2005/06, 27625, no. 63 (Deltares); TNO, 1969.

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Of the six TO2 institutes, only the TNO has a statutory basis (although the DLO's statutory tasks have also been enshrined in legislation). The NLR was established by law, but the relevant legislation does not define its tasks. The NLR and the DLO both have statutory funding arrangements.

The TO2 institutes play an important role in promoting and supporting collaboration between government, knowledge organisations, and enterprise.

The Ministry of Economic Affairs has identified three basic tasks for the TO2 institutes (Ministerie van Economische Zaken, 2013):

- 1. Development, application and dissemination of knowledge in order to resolve societal challenges and support government task and policy. Part of this research is carried out as a mandatory statutory task.
- 2. Development, absorption, application and dissemination of knowledge to strengthen the innovativeness and competitiveness of the Netherlands, particularly for the top sectors.
- 3. Management of strategic research facilities, including facilities that are unique in the Netherlands and facilities of an international character.'

The organisations carry out applied research of practical relevance. They do so at the behest of ministries (policy support), enterprises and public authorities (contract research) and as members of public-private consortiums. In this way, they link basic research as undertaken at universities with innovation in government and enterprise.

Two of these organisations, the DLO and the TNO, have also been assigned statutory research tasks (WOTs). In that role, they generate knowledge required by government to implement domestic and international legislation. This includes monitoring food for the presence of contaminants, a task carried out by the RIKILT - one of the DLO institutes - or monitoring fish stocks in the North Sea, the job of another DLO institute, Imares.

The facilities managed by the TO2 institutes play a vital role in their research and their statutory tasks. For example, the DLO has a high-containment unit for studying contagious animal diseases, Deltares operates a Delta Flume used in the design and testing of dikes, and the TNO tests projectiles in its laboratory for ballistic research. These facilities are needed for R&D, but are too expensive for many enterprises to maintain themselves. Appendix A describes the six TO2 institutes, their research and their facilities.

Table 10 Size of TO2 institutes in 2014 (income in thousands of euros)

Name	No. of FTE's (2014)	Total income (2014)
TNO*	2,736	424,194
DLO	2,496	330,061
ECN*	450	76,164
Deltares	745	104,082
NLR**	553	80,153
MARIN	366	42,720

Sources: annual reports (TNO, NLR, ECN, Deltares, DLO (WUR)); information requested (MARIN).

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- Non-consolidated figures were used for TNO and ECN. The ECN's figures do not include ECN Holding (e.g. NRG), and the TNO's do not include TNO Companies.
- Excluding staff employed by the DNW, the German-Dutch Wind Tunnels.

In total, the TO2 institutes employ 7,346 FTEs (see Table 10). The TNO and the DLO are the biggest by far, with more than 2,000 FTEs per organisation. Both organisations operate in a broad field and are divided into various units. The DLO consists of nine individual research institutes, each one operating under its own management. Since 1999, the DLO has been part of Wageningen University and Research Centre (WUR). The TNO is a portfolio organisation consisting of multiple clusters organised along five socially relevant themes and two areas of expertise: 'technical sciences' and 'earth, life and social sciences'. Before being reorganised in 2005, 2011 and 2014, the TNO and the DLO were made up of separate institutes.

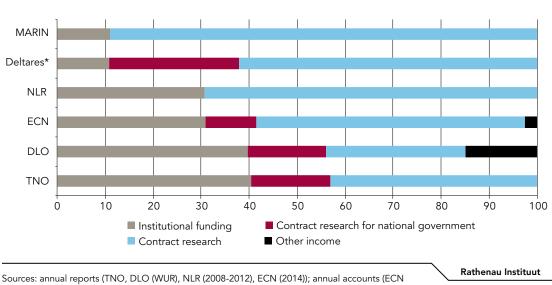
Staff numbers have shrunk since 2010 by about 12.6 per cent. The decline has been steepest at the TNO. The only organisation to see its staff grow in this period, by 62 FTEs, is MARIN.

Figure 6 shows the various sources of income of the individual TO2 institutes. The TNO and the DLO receive the highest percentage of institutional funding, at about 40 per cent. MARIN and Deltares receive the lowest amount of institutional funding, both in absolute terms and percentage-wise (10.9 per cent). Unlike for Deltares, at Marin this amount also includes programme funding. Without programme funding, institutional funding at MARIN accounts for 8.1 per cent of its total income (see Table 11).

In the case of the DLO and the TNO, 'contract research for the national government' also includes income sourced from 'public authorities'. This could include contract research commissioned by

decentralised authorities. In the case of the ECN, the NLR and Deltares, this is contract research for the national government. 'Other income' may be the result of licensing agreements, prototype leasing (ECN), leasing of facilities, or income from sales and course fees (DLO).

Figure 6 Sources of income of TO2 institutes in 2014 as a percentage of total income



(2008-2013), NLR (2013-2014)); information requested (Deltares, MARIN).

Contracts that Rijkswaterstaat awards to Deltares are categorised as contract research for the national government. Upon enquiry, Deltares stated that it does not receive programme funding.

Figure 7 shows income trends for the TO2 institutes between 2010 and 2014. Four TO2 institutes – TNO, ECN, DLO and Deltares – saw their income fall. Whereas the DLO's income fell steadily from 2010 onwards, by 8 per cent, the TNO and Deltares experienced their drop in income after 2012. Deltares' income declined by 8 per cent in the past two years, and the TNO's by 16.1 per cent. The ECN's income fell by 8.9 per cent.

600,000 500,000 400,000 300,000 DLO 200,000 100,000 0 2010 2011 2012 2013 2014 120,000 100,000 80,000 Deltares ECN 60,000 MARIN 40,000 20,000 0 2010 2011 2013 2014 2012

Figure 7 Trends in income for the TO2 institutes, 2010-2014 (in thousands of euros)

The decline is largely due to a fall in institutional funding by the national government. Institutional funding dropped by 29.6 per cent at the ECN, by 19.9 per cent at Deltares, by 15.6 per cent at the DLO, and by 12.1 per cent at the TNO.

Sources: annual reports (TNO, DLO (WUR), Deltares, NLR (2008-2012), ECN (2014)); annual accounts (ECN (2008-2013), NLR (2013-2014)); information requested (MARIN).

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This report classifies two different types of funding as institutional funding. The first is basic funding that the TO2 institutes receive on a structural basis from the Ministry of Economic Affairs, which is the governing ministry. The organisations can use this basic funding to develop the knowledge base and/ or to maintain their facilities. In addition, the organisations receive programme funding from other ministries with which they have a long-term funding relationship (such as the TNO's relationship with the Ministry of Defence: see Table 1). This programme funding is not acquired in competition with others, but is tied to specific research contracts; the TO2 institutes are therefore not at liberty to spend it at their discretion.

Upon enquiry, Deltares was the only TO2 institute to report that it does not receive programme funding. Deltares works on a contract basis for Rijkswaterstaat (part of the Ministry of Infrastructure and Environment). Although it does not compete with others for these contracts, there is no pre-determined budget and no funding under a research programme; the individual contracts are awarded as project funding.

If we consider these two types of funding separately, we see that basic funding provided by the governing ministry has declined, both in absolute terms and as a percentage of institutional funding (see Table 11).

Table 11 Trends in basic funding for TO2 institutes<sup>18</sup>

Name	Decline in basic funding between 2010 and 2014	Decline in programme funding (in %)	Share of institutional funding in 2010 (in %)	Share of institutional funding in 2014 (in %)
Deltares	19.9	-	-	-
DLO	59.6	2.8	22.5	10.8
ECN	40.6	26.3	23.4	19.8
MARIN	8.1	+2.7	94.2	79.8

Sources: annual reports (DLO and ECN); personal communication (Deltares, MARIN).

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Not only is institutional funding falling, then, but it is also increasingly being tied to specific research contracts.

Income derived from contract research for the (national) government fell by 13.7 per cent at the DLO and by 10.8 per cent at the TNO. At the DLO, the decline has been compensated by a rise of 13.8 per cent in income from contract research commissioned by other parties. At the ECN, contract research for the national government has increased by 109.4 per cent. Other contract research has fallen by 5.6 per cent. At Deltares, income from contract research for the national government dropped by 15.8 per cent, while other contract research has been more or less stable

The NLR's income has been more or less stable. At MARIN, both institutional and project funding have increased by 8 per cent. The increase in institutional funding can be ascribed to a very low level of programme funding in 2010 compared with other years (€ 252,000 in 2010 as opposed to € 500,000 in 2009 and € 600,000 in 2011). Basic funding, on the other hand, has fallen by 8.1 per cent. In addition, MARIN's dependence on institutional funding is so small (see Figure 6) that its rise in income can be ascribed mainly to the increase in project funding.

# 8 Sector-oriented organisations

The sector-oriented organisations are the biggest group of public knowledge organisations, numbering ten in all. Of these ten, seven (more than half) are part of the Ministry of Public Health, Welfare and Sport's knowledge infrastructure. The remainder receive institutional funding from the Ministry of Education, Culture and Science (one organisation) and from the Ministry of Infrastructure and the Environment (two organisations). Table 12 lists the sector-oriented organisations and their origins.

Table 12 Origin of sector-oriented organisations

Name	Founded	Origin	Governing ministry
Institute for Road Safety Research (SWOV)	1962		I&M
Boekman Foundation	1963	At the initiative of the Federation of Artists Associations	OCW
Netherlands Institute for Health Services Research (NIVEL)	1985	Institute of Dutch Physicians (1965)	VWS
VeiligheidNL	1985	Consumer Safety Foundation	VWS
Trimbos Institute	1996	Merger between the Dutch Mental Health Centre (NcGv) and the Netherlands Institute for Alcohol and Drugs (NIAD)	VWS
W.J.H. Mulier Institute	2002		VWS
Geonovum	2007		I&M
Movisie	2007	Netherlands Institute for Care and Wellbeing (NIZW – founded in 1988)	VWS
Netherlands Youth Institute (NJi)	2007	Netherlands Institute for Care and Wellbeing (NIZW – founded in 1988)	VWS
Vilans	2007	Netherlands Institute for Care and Wellbeing (NIZW – founded in 1988)	VWS

Sources: websites (Trimbos Institute, Mulier Institute, Geonovum, Boekman Foundation); Wouters and Bakker, 2014 (Vilans, NJi, Movisie); http://www.anababa.nl/praktisch/organisaties/stichtingconsument- en-veiligheid (VeiligheidNL): charter (SWOV); Prins, [undated] (NIVEL).

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Sector-oriented organisations are independent entities operating under private law. Not all of them were established by the national government. NIVEL is the successor to the Institute of Dutch Physicians and the Mulier Institute is the product of a partnership between a research office and three Dutch universities. The Boekman Foundation was founded at the initiative of the Federation of Artists Associations (see Appendix A). The essence of the relationship between all these organisations and their primary ministry consists of funding and associated tasks and/or research programming.

What typifies them is that they all take up an position midway between the national government and 'the field', consisting of decentralised authorities, executive agencies (such as the police force and Mental Health Care organisations), and organisations providing non-commercial services (such as hospitals and museums). The national government is responsible for the quality and availability of these services as a system, and the organisations are therefore often funded from the public purse. Their responsibilities lie in public health, safety, the arts, sport, and public spaces.

The roles that they play in this position vary considerably, but all sector-oriented organisations have an accumulation and coordination function. That means that a single organisation has an overview of all the knowledge available in its specific area of concern. It accumulates that knowledge, makes it accessible, and brings it to the attention of various stakeholders. These tasks can be divided into four roles that the various organisations fulfil, generally speaking: coordination, data collection, knowledge retention, and platform and network provision:

- Coordination means that the sector-oriented organisations ensure the availability, now and in the future, of knowledge and services in their field. Geonovum, for example, is working to standardise geo-information sharing.
- Data collection means that the organisations gather data on their sector and use that data to conduct monitoring studies. NIVEL, for example, collects data from care providers about primary care and - like the Trimbos Institute - undertakes various longitudinal monitoring studies.
- Knowledge retention means that the organisation makes sure that knowledge available in its area is retained within the organisation itself or made available through the organisation. Movisie, for example, has a database of effective, evidence-based interventions (which can be accessed on its website) and the Boekman Foundation runs a library of publications covering all sorts of societal aspects of art and culture. It also collects available data on culture from public and private sources (available at www.cultuurindex.nl).
- Platform and network: the sector-oriented organisations link professionals, policymakers and consumers/patients so that they can share what they know and generate knowledge collectively. They do this for example on websites (Vilans), through training (NJi) or by organising expert meetings and debates (Boekman Foundation).

VeiligheidNL and the Trimbos Institute also play a role in public information and prevention by running public service campaigns.

Table 13 Size of sector-oriented organisations in 2014 (income in thousands of euros)

Name	No. of FTE's	Total income
Trimbos Institute	164.0	17,895
NIVEL	156.7	15,345
Vilans	140.0	31,005
Movisie	121.3	14,441
NJi	96.1	14,327
SWOV	42.4	5,684
VeiligheidNL	41.8	6,031
Mulier Institute	18.9	1,946
Geonovum	*13.4	4,150
Boekman Foundation	7.9	**1,168

Sources: annual reports (Vilans, Movisie, NJi, SWOV, VeiligheidNL, Mulier Institute, Geonovum); annual accounts (Trimbos Institute), information requested (NIVEL).

Rathenau Instituut

- Some of these employees have been outsourced by the four organisations that provide the funding: the Ministry of Infrastructure and the Environment, the Ministry of Economic Affairs, the Land Registry, and the Geological Survey of the Netherlands (part of the TNO).
- This includes the € 100,000 Johannes Vermeer Award, whose presentation is organised by the Boekman Foundation.

In 2014, the sector-oriented organisations employed a total of 803.4 FTEs (see Table 13). Their size varies considerably, from the Trimbos Institute (164 FTEs) to the Boekman Foundation (7.9 FTEs). The organisations allied with the Ministry of Health, Welfare and Sport (Vilans, NIVEL, NJi, Movisie, Trimbos Institute, Mulier Institute and VeiligheidNL) represent the biggest group, with 738.8 FTEs.

Figure 8 identifies the sources of income per organisation. The share of income accounted for by institutional funding varies considerably, from 16.8 per cent at Geonovum to 68.6 per cent at VeiligheidNL. The differences have arisen not only owing to absolute differences in the amount received in institutional funding, but also because some organisations receive a proportionally larger share of their income from project funding.

Geonovum Vilans NIVEL NJi Trimbos Institute Mulier Institute Movisie Boekman Foundation **SWOV** VeiligheidNL 0 10 20 30 40 50 70 80 90 60 100 Institutional funding Contract research for national government Other income Contract research Rathenau Instituut Sources: annual reports (Boekman Foundation, Mulier Institute, NJi, SWOV, VeiligheidNL, Vilans); annual accounts (Boekman Foundation, Trimbos Institute, VeiligheidNL), year report

Figure 8 Sources of income of sector-oriented organisations in 2014 as a percentage of total income

(Geonovum); financial report (MOVISIE); information requested (NIVEL).

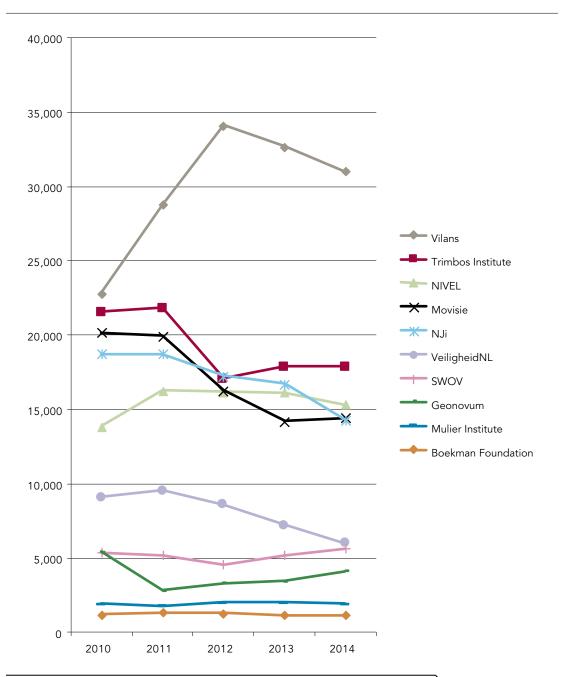
Figure 9 shows that trends in income varied between the sector-oriented organisations between 2010 and 2014. Vilans, NIVEL and the SWOV saw their income increase in this period, owing to a rise in project funding from both the national government and contract research. At 105.9 per cent, the increase in project funding at the SWOV more than doubled, the biggest increase of all.

The Boekman Foundation also saw its project funding grow, by 42.4 per cent, in this period. On the other hand, the Trimbos Institute, the NJi, Movisie, VeiligheidNL and Geonovum experienced a decline in income derived from project funding. The decline was more than 20 per cent for VeiligheidNL, Geonovum, the NJi and Movisie and 17.1 per cent for the Trimbos Institute. The Mulier Institute's income remained stable.

Institutional funding increased at the Trimbos Institute (by 71.6 per cent, € 3.4 million). Along with the rise in institutional funding, the Trimbos Institute was also given a set of new tasks. In 2013, tobacco control activities were transferred to this organisation. That makes the Trimbos Institute the centre of expertise for the prevention of alcohol, drug and tobacco abuse. Institutional funding is on the decline at six of the sector-oriented organisations, however. Movisie and the Boekman Foundation have seen this category of income fall by almost a quarter. The same holds for the NJi (20.7 per cent), the SWOV (16.1 per cent), Vilans (14.3 per cent) and the NIVEL (11.3 per cent).

Vilans, NIVEL and the Boekman Foundation have compensated for the loss of institutional funding with an increase in project funding. That is not the case for the NJi and Movisie, where project funding is also declining - as it is at the other sector-oriented organisations, with the exception of the SWOV.

Figure 9 Trends in income for the sector-oriented organisations, 2010-2014 (in thousands of euros)



Sources: annual reports (Boekman Foundation, Mulier Institute, NJi, SWOV, VeiligheidNL, Vilans); annual accounts (Boekman Foundation, Trimbos Institute, VeiligheidNL), year report (Geonovum); financial report (MOVISIE); information requested (NIVEL).

# 9 Professional research and training organisations

Three of the public knowledge organisations combine research and training. The Police Academy trains police officers and conducts research for the National Police Force, and the Netherlands Defence Academy (NLDA) does the same for the army, air force, navy and military constabulary. In the case of the NLDA, we specifically mean the Foundation for Scientific Education and Research (SWOON), which carries out research. The third professional research and training organisation is the Clingendael Institute, which studies international relations and combines this work with training programmes and courses for Dutch and foreign diplomats of today and tomorrow.

Table 14 Origins of professional research and training organisations

Name	Founded	Origin	Legal status	Governing ministry
Netherlands Institute of International Relations Clingendael (Clingendael)	1983	Merger between five organisations	Foundation	BuZa
Foundation for Scientific Education and Research at the Netherlands Defence Academy (SWOON-NLDA)	2005	NLDA is the result of an administrative merger between the Royal Netherlands Naval College (KIM), Royal Netherlands Military Academy (KMA) and the Netherlands Defence College (IDL). Research at SWOON is carried out by the Faculty of Military Sciences (FMW).	Foundation/ RWT	Defence
Police Academy	1992	National Police Selection and Research Institute	ZBO/RWT	V&J

Sources: website (Clingendael): Klinkert, 2011; Tops and Van der Wal, 2010.

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Each organisation organises training in its own manner. The SWOON-NLDA takes the form of a university faculty (FMW) and offers Bachelor's and Master's programmes. The research that it carries out is equally academic in nature, although it involves shorter periods of time.

The Police Academy offers training at vocational, higher professional and academic levels and takes the form of a number of knowledge networks (lectoraten), comparable to a Dutch institution of higher professional education. The Clingendael Institute does not run any multi-year programmes<sup>19</sup>, but instead offers courses and training to the Dutch and foreign diplomatic corps and others in professional international positions, and to those who are pursuing an international career. See Appendix A for more information about the individual organisations.

Table 15 Size of professional research and training organisations in 2014 (income in thousands of euros)

Name	No. of FTE's in 2014	Income in 2014
Police Academy	1,485.4	179,735
SWOON-NLDA	118.0	12,669
Clingendael	*69.7	9,700

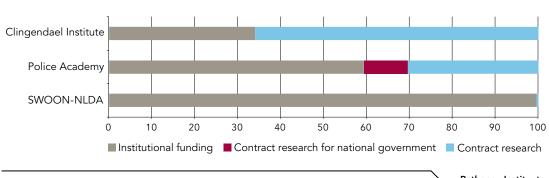
Sources: annual accounts (SWOON-NLDA); annual report (Clingendael, Police Academy); information requested (SWOON-NLDA).

The number of FTEs is based on data in previous years.

<sup>19</sup> Clingendael has, however, developed a Master's Programme in International Relations and Diplomacy in cooperation with Leiden University.

The three organisations together employ approximately 1,675 FTE's (see Table 15). Most of these work for the Police Academy (1,485.4 FTEs). The SWOON-NLDA and Clingendael are much smaller in size, with 118 and about 70 FTE's respectively. Figure 10 reports the sources of income for the three organisations. It shows that institutional funding accounts for almost all of the SWOON-NLDA's income, but only 34 per cent of Clingendael's. The Police Academy occupies a middle position, with 59.4 per cent of its income consisting of institutional funding. Unlike the other two organisations, we also know what percentage of the Police Academy's income (10.2 percent) consists of contract research from the national government.

Figure 10 Sources of income of professional research and training organisations in 2014 as a percentage of total income



Sources: annual report (Clingendael); annual accounts (Police Academy); information requested (SWOON-NLDA).

Figure 11 Trend in income for professional research and training organisations, 2010-2014 (in thousands of euros)

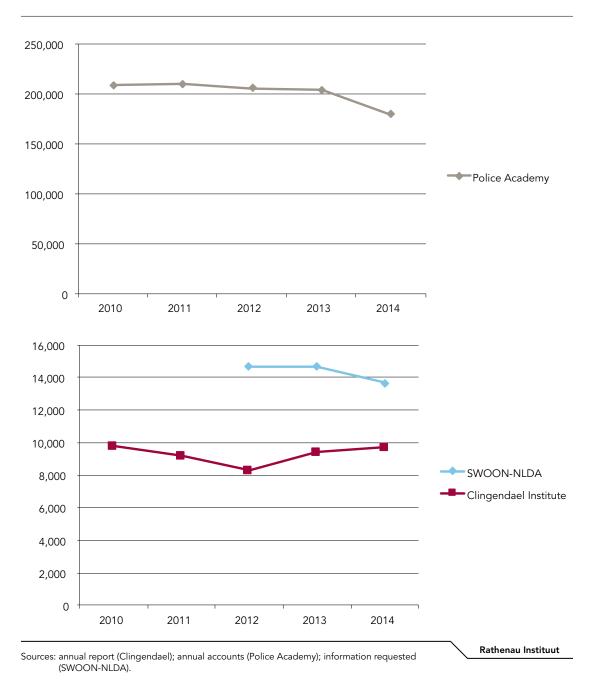


Figure 11 shows a downward trend in the Police Academy's income. Between 2010 and 2014, its income fell by 13.9 per cent (€ 29 million). Institutional funding declined during this period by 18.7 per cent. Contract research dropped by 10.7 per cent. Contract research for the national government, on the other hand, increased by 14.1 per cent.

At the Clingendael Institute, income fell until 2012 but by 2014 it was back up to 2010 levels. The proportions changed, however: institutional funding fell by € 0.5 million (13.2 per cent), whereas contract research rose by € 0.4 million (6.7 per cent).

#### Description of public knowledge organisations in the Netherlands Appendix A

This appendix provides a brief description of each organisation's history and its key activities. The descriptions are based on their websites, annual reports and - where available - tasks identified in legislation or a regulatory framework. We also drew information from historical background studies or evaluations for a few organisations.

# Policy-oriented organisations

#### **CPB**

The Netherlands Bureau for Economic Policy Analysis (CPB) was founded in 1945. The CPB studies economic trends as well as such subjects as the functioning of financial markets and the effects of globalisation and ageing populations. It is best known for its economic forecasts, including the Central Economic Plan (CEP) and Macro Economic Outlooks (MEV). These forecasts provide the official basis for the national budget of the Netherlands. The CPB also analyses the economic effects of election manifestos in the run-up to elections and during the negotiations for a new coalition government. Finally, the CPB conducts societal cost-benefit analyses, for example of major infrastructural projects.

#### SCP

The Netherlands Institute for Social Research (SCP) was founded in 1973. The SCP's three tasks are to carry out outlook studies, to assist in selecting informed policy objectives, and to acquire evidence for evaluating policy.

The SCP conducts research on health care, education, culture and the labour market. Its main focus is on wellbeing. Examples of topics that it addresses are people's opinions and behaviour, how public services in the above four areas are used and organised, and matters related to public and employee participation. The SCP focuses on three lines of research with regard to these themes. To begin with, the SCP charts trends. Second, it seeks to explain how differences between individuals or groups can arise, for example in income or health. Third, it studies the impact of the changing welfare state and the changing relationship between citizens and government on life circumstances and quality of life. One of the SCP's better-known products is its publication De Sociale Staat van Nederland [The Social State of the Netherlandsl.

#### WODC

The Research and Documentation Centre (WODC) was first founded in 1973. In its present form, it was established in 1994.

The WODC is part of the Ministry of Security and Justice and supports the Ministry's policymaking by conducting research in the three areas for which it is responsible: security, justice and alien affairs. It studies the justice system, judicial procedure and law enforcement, crime, security, and immigration and integration. The WODC conducts some of this research itself; other projects are outsourced to external parties, under its supervision. One of the WODC's five divisions was set up for that purpose.

As the name indicates, the organisation is also responsible for documentation. It does this in two areas. First of all, the WODC collects judicial and security data and links the two. Based on this data, it conducts various monitoring studies, for example on youth crime and organised crime. Second, the WODC makes (scientific) knowledge available in a comprehensible manner, even if it was generated elsewhere.

#### KiM

The Netherlands Institute for Transport Policy Analysis (KiM) was founded in 2006. The KiM is an independent organisation within the Ministry of Infrastructure and the Environment. Its aim is to improve the Netherlands' strategic knowledge base for mobility policy. The KiM describes trends in mobility (including of certain groups), explains past developments, makes forecasts, builds scenarios (for example about the self-driving car) and performs ex ante and ex post analyses of the effects of policy measures. This may include mobility-related subjects, such as the sustainability and safety of mobility and the relationship between government and market. The KiM conducts its own analyses and amasses knowledge from other sources. It also collects and manages data. Its 'Knowledge at the Table' products ensure that it makes a direct contribution to policymaking at the Ministry of Infrastructure and the Environment. KiM's knowledge is publicly available both nationally and internationally through its publications.

# **PBL**

The Netherlands Environmental Assessment Agency (PBL) was established in 2008 (as a merger of two former agencies for spatial planning and environment). It is part of the Ministry of Infrastructure and the Environment.

The PBL is the national institute for strategic policy analysis in the fields of the environment, nature and spatial planning. Its core tasks are to investigate and document current environmental, ecological and spatial quality, to explore future social trends that could influence that quality, to evaluate policy, to 'identify possible strategic options for achieving government objectives', and to call attention to societal issues of importance. Policy relevance is the prime concern in all its work and it contributes to improving the quality of political and administrative decision-making by conducting outlook studies, analyses and evaluations. The PBL always takes an integrated approach to issues. That means that it considers ecological, economic and institutional dimensions in its analyses and combines as many environmental, nature-related and spatial aspects as possible in its research. It addresses such topics as climate change, energy, mobility, population shrinkage, food supply and spatial planning. Significant publications include its Assessment of the Human Environment [Balans van de Leefomgeving], Spatial Outlooks, Nature Outlooks and the National Energy Outlook [Nationale Energieverkenning].

# Government laboratories

### KNMI

The Royal Netherlands Meteorological Institute (KNMI) was founded in 1854, making it the oldest public knowledge organisation in the Netherlands. It has been an administrative agency since 1995.

The KNMI studies the weather and conducts climatological and seismological research. Many people believe that the KNMI is responsible for media weather forecasts, but that is not the case. The KNMI produces general weather forecasts that include warnings about or reports on measured weatherrelated phenomena. Radio and television forecasters, or tools like Buienradar ('Rainfall Radar' app for the Netherlands), can use this information to produce their own weather forecasts or products.

The KNMI informs the public, government, and the aviation and shipping industries based on this information. The KNMI is responsible for issuing weather warnings and also reports on seismological activity. In the event of disasters, government organisations must make use of the KNMI's services. To carry out these basic tasks, the KNMI has installed observation and measuring equipment throughout the Netherlands and makes use of satellite images. The subjects that the KNMI researches include climate change and the seismological risks associated with induced earthquakes in the Province of Groningen (related to gas extraction activities there).

Until 1 January 2016, the KNMI's tasks laid down in the KNMI Act [Wet op het KNMI]. As of that date, its basic tasks have been defined in the Ministerial Decree on Meteorology and Seismology Tasks [Ministeriële Regeling Taken Meteorologie en Seismologie]. The Minister of Infrastructure and the Environment (I&M) has been assigned various duties of care in this regard. They are defined in the Meteorology and Seismology Tasks Act [Wet Taken Meteorologie en Seismologie], which also came into force on 1 January 2016.

#### **CBS**

Statistics Netherlands (CBS) was founded in 1899. In 2004, its two governance bodies (the directorgeneral for statistics and the Central Commission for Statistics (CCS)) became independent administrative bodies (ZBO).20

The CBS's statutory task is 'to conduct statistical research for government for practical, policymaking and scientific purposes and to publish the statistics compiled on the basis of such research'.21 This means that the CBS is responsible for the Netherlands' official statistics. It also compiles EU-wide statistics. The subjects of its statistical research include the population, education, businesses, transport, nature and the environment. The CBS presents these statistics and makes them available (in relation to each other and in context) in various formats.

The CBS's figures are publicly available and can be consulted by all. Under certain conditions, researchers are permitted to inspect the CBS's anonymised micro data.

#### RIVM

The National Organisation for Public Health and the Environment (RIVM) was founded in 1909. In its present form, it was established in 1984 after a series of mergers<sup>22</sup>.

The RIVM started as the Central Laboratory, a research organisation that studied infectious diseases and their causes (for example cholera, diphtheria, typhus and syphilis), nutrition, pharmacological drugs, and water and air pollution. This included research on the causes of infectious diseases, on sera and vaccines, and on detection of hazardous substances in water, food and the air. As the years went by, the research topics changed. For example, in the 1960s the focus shifted to the environment, while nowadays there is considerable interest in lifestyle and external safety. In every instance, the RIVM's work is concerned with human health and a healthy living environment.

The RIVM has transformed itself from a research organisation into a centre of expertise. It conducted its first screening programme in 1951.<sup>23</sup> From that year forward, the RIVM also began carrying out outlook studies. From 2005 onwards, the RIVM also became responsible for various coordination and oversight tasks in addition to its research and advisory work, for example coordination of the National Immunisation Programme in 2008.

The organisation also became more active in providing public service information. In 2007, it set up the RIVM Centre for Healthy Living, meant to promote a healthy lifestyle. In 2003, most of the RIVM's vaccine-related activities were transferred to the Netherlands Vaccine Institute. Nevertheless, the RIVM has retained its traditional research tasks; it is currently building a new location, a third of which will consist of laboratories.

<sup>20</sup> The intention is to turn the two ZBOs into a single ZBO (Jaarverslag CBS, 2014, p. 7).

<sup>21</sup> Wet op het Centraal Bureau voor de Statistiek, Article 3.

<sup>22</sup> In 1934, the Central Laboratory merged with the National Serological Institute to form the National Institute for Public Health (RIV) In 1984, the RIV merged with the National Institute for Drinking Water Supply (RID) and the Institute for Research on Waste Materials (IVA) to form the Institute for Public Health and the Environment (RIVM).

<sup>23</sup> Screening pregnant women for syphilis

#### NFI

The Netherlands Forensic Institute (NFI) was established in 1999. It is an administrative agency of the Ministry of Security and Justice.

The NFI performs forensic investigations in criminal cases and develops new forensic research methods. It has a wide array of equipment at its disposal, for example for the analysis of samples (blood, saliva), firearms and ammunition. The organisation has developed RNA cell typology, a better technique for determining the nature of DNA traces. The NFI's third task is to serve as an international centre of knowledge and expertise for forensic investigations.<sup>24</sup>

2009 saw the founding of the NFI Academy. The NFI Academy also offers courses for professionals within and outside the criminal law system, for example emergency workers who must be able work at the scene of a crime without disturbing any evidence.

# (N) IFV

The Safety Institute resulted from a merger in 2013 between the Netherlands Institute for Safety (NIFV) and various emergency services. The merger paralleled the development of safety regions in the Netherlands, which became effective in 2010.

The IFV focuses on firefighting, disaster relief, crisis management and medical services during disasters. It considers such aspects as transport safety, fire safety and information supply during a crisis or disaster. The IFV has been given a number of statutory tasks in this area, for example collecting and managing relevant knowledge and, where necessary, conducting applied research. Other statutory tasks include setting up and running officer training programmes for the fire brigade and issuing exemptions and certificates for firefighting training programmes. Finally, the IFV is responsible for procuring, managing and, where necessary, making materials and equipment available to the safety regions.

All of these activities are geared to the safety regions, which must be given access to the IFV's research results and can, if they so wish, transfer joint tasks to the IFV. To share its knowledge with professionals and answer their questions, the IFV runs the 'Infopunt Veiligheid' website.

### **TO2** institutes

# NLR

The Netherlands Aerospace Centre (NLR) was founded in 1919.

Its mission is 'making air transport and space exploration safer, more sustainable and more efficient'. The NLR works for clients in both civil and military aviation in the aerospace sector. It has a number of large-scale facilities, the wind tunnels being the most prominent among these.

#### MARIN

The Maritime Research Institute of the Netherlands (MARIN) was established in 1929<sup>25</sup> by government and the maritime industry as a joint shipbuilding testing station.

MARIN's mission is 'to make ships cleaner, smarter and safer'. The organisation tests and refines new vessel technologies and assesses their impact on the environment. It does this in various large-scale basins that can generate currents and waves in order to test propellers, ship models and offshore facilities. MARIN also has VTS (vessel traffic services) simulators used for training all Dutch VTS operators and Dutch pilots.

MARIN mainly carries out contract research for businesses but is also involved in research for the Ministry of Defence and the Ministry of Infrastructure and the Environment.

#### TNO

The Netherlands Organisation for Applied Scientific Research (TNO) was established in 1932. It is the largest of the public knowledge organisations.

The TNO's mission is to connect people and knowledge to create innovations. Unlike the other five organisations in its group, the TNO is not dedicated to a single area of endeavour but uses its expertise wherever it can drive innovation and where there is a demand from government or the business community. Its research is organised into five themes: industry, healthy living, defence, safety and security, urbanisation, and energy. These themes cover all nine of the Netherlands' top sectors (mainly High Tech Systems & Materials and Agrifood). The TNO also conducts research for the Ministry of Defence. It has one statutory research task, concerning the deep subsurface.

The TNO carries out its research in various laboratories (for example for ballistic research) and testing facilities (such as VeHIL for active vehicle safety system testing). TNO Companies is an allied business group, including TNO spin-offs - as well as some of its facilities - that commercialise new technologies.

#### DLO

The DLO Foundation (DLO), which focuses on agricultural research, was established in 1938. In 1999 it became an independent organisation and merged with Wageningen University to become Wageningen University and Research Centre (WUR).

The DLO consists of nine research institutes that each has its own task, from the RIKILT (food safety) to IMARES (strategic and applied marine ecology). All these institutes focus on the relationship between agriculture, fisheries, food safety and the environment and base their work on the DLO's mission: 'to explore the potential of nature to improve the quality of life'. The DLO has been charged with a total of six statutory research tasks. The facilities differ from one institute to the next. The DLO manages several databases. One of its bigger facilities is the High Containment Unit in Lelystad, dedicated to studying contagious animal diseases. The DLO also runs various laboratories and field testing facilities.

## **ECN**

The Energy Research Centre of the Netherlands (ECN) was founded in 1955. In 1997, its nuclear research activities were transferred to the Nuclear Research Group (NRG), now the ECN's biggest subsidiary. The ECN focuses on sustainable energy systems, energy efficiency and energy policy. De missie van ECN is "wij ontwikkelen kennis en technologie voor een duurzame energiehuishouding". The ECN's mission is to develop new technology and conduct pioneering research to facilitate the

transition to sustainable energy management. It conducts research in its own laboratories and modelling and testing facilities. The ECN also has a wind turbine testing facility, while the NRG operates a High Flux Reactor for research purposes and for the production of medical isotopes.

#### **Deltares**

Deltares was established in 2007. At the time it was known as the National Delta Institute.

Deltares's mission is 'Enabling Delta Life'. It undertakes research and uses its technical knowledge to advise on water, subsurface and infrastructure matters in delta regions. This might concern flood risk management, drinking water supply, dyke monitoring, or the protection of delta ecosystems. Deltares has an extensive array of software simulation products (numerical models), various hydro facilities including the Delta Flume (for studying the impact of waves on dykes), and geo facilities, including the GeoCentrifuge.

## Sector-oriented organisations

#### **SWOV**

The Institute for Road Safety Research (SWOV) was established in 1962 in order to coordinate and encourage the scientific study of road safety.

The SWOV conducts research and disseminates knowledge about road safety to traffic and transport professionals working for local, regional and national government, consultancy firms, businesses and interest groups, all for the purpose of improving road safety. Its research covers not only human behaviour, human safety, vehicles and roads, but also ageing, urbanisation, computerisation and other phenomena. In addition, the SWOV identifies, monitors and investigates road safety problems.

The SWOV has a knowledge centre (a virtual and physical library) that can be accessed by third parties and runs its own facilities, for example a driving simulator. It also uses data provided by other parties, for example the CBS and the police force.

## **Boekman Foundation**

The Boekman Foundation was founded in 1963 at the initiative of the Federation of Artists Associations. Its aim is to study the relationship between art and government and the role of art in society.

The Boekman Foundation studies the arts and culture in both policy and practice. Its mission is twofold. First of all, it collects and disseminates knowledge and information about the arts and culture. Second, it encourages research and thinking about various aspects of the arts and culture. It does this mainly by managing its own digital and physical collections in a library that basically contains all publications concerning 'organised culture', from research papers to the annual reports of cultural institutions. It also disseminates knowledge by holding debates and through its Arts Index Netherlands website (www.cultuurindex.nl), organised in cooperation with the SCP.

## **NIVEL**

The NIVEL was founded in 1985. In 1995, its area of operation was expanded to cover the entire field of health care. Its name was changed accordingly (Netherlands Institute for Health Services Research), but the acronym was retained.

The NIVEL studies the effectiveness and quality of health care by combining applied and basic research. It also studies the organisation of the Dutch health care system: patients, professionals, institutions (from hospitals to health insurers) and the relationships between them, as well as the structure and policy within which they operate.

The NIVEL manages a number of databases and panels, such as the NIVEL Primary Care Database, where it collects data on the utilisation of GP services and prescription drugs. The NIVEL bases much of its research, including a number of monitoring studies, on the information provided by these panels and databases.

#### VeiligheidNL

VeiligheidNL – the Consumer Safety Institute – has been around since 1985 but was known until 2013 as Stichting Consument en Veiligheid [Consumer Safety Foundation]. Veiligheid NL receives funding from the Ministry of Public Health, Welfare and Sport for recording and monitoring physical injuries and for its efforts to change behaviour in high-risk categories.

Its aim is to reduce the toll of injuries in the Netherlands, and it focuses especially on safety in everyday situations, for example in the home, at work, at school, in traffic, in the playground, and in nursing and care facilities. VeiligheidNL focuses on such subjects as sports injuries (and their prevention), preventing falls among the elderly, occupational safety, and bullying at school. It monitors and carries out research geared to resolving safety issues. It also specialises in developing and evaluating campaigns aimed at safe behaviour and interventions.

#### Trimbos Institute

The Trimbos Institute - the Netherlands Institute of Mental Health and Addiction - was established in 1996. In 2013, tobacco control activities were transferred to this organisation. That makes the Trimbos Institute the Netherlands' centre of expertise for the prevention of alcohol, drug and tobacco abuse.

The organisation focuses on mental health, substance use and addiction issues. Its main themes are alcohol, drugs, tobacco, behavioural addictions, severe mental illness, and mild & moderate mental health disorders. The Trimbos Institute addresses the symptoms, treatment and prevention of mental health and addiction problems by monitoring, by developing new guidelines, treatment methods and prevention programmes, and by studying and evaluating mental health and addiction care organisations.

To ensure that this knowledge is disseminated to professionals and those needing care, it runs a wide range of websites geared to the general public, operates an information hotline for smoking, drugs and alcohol, and offers a broad range of training courses for care professionals.

## Mulier Institute

The Mulier Institute – the Centre for Research on Sports in Society – was founded in 2002 as the result of partnership between the research organisation Diopter, Janssens & Van Bottenburg bv and Tilburg University, Utrecht University, and the University of Amsterdam. Since 2013, it has had its own Management and Supervisory Boards.<sup>26</sup>

The aim of the Mulier Institute is 'to stimulate the coordination, synchronization and cooperation of more fundamental and policy-based scholarly sports research in the Netherlands'. It monitors developments in sport, concentrates existing research and carries out research of its own. Until 2013, the Mulier Institute was responsible for coordinating sports research at the universities. That responsibility was removed in 2013. The organisation continues to promote sports science by encouraging and supporting the appointment of full and associate professors in this field and by providing young sports researchers with facilities. Two of the Mulier Institute's specific tasks are to support higher education in training sports researchers and to encourage the appointment of full and associate professors in that area.

#### Geonovum

Founded in 2007, Geonovum is the National Spatial Data Infrastructure (NSDI) executive committee in the Netherlands. Its mission is threefold: to provide better access to geo-information in the public sector, to develop and maintain the required geo-standards to do so, and to help government make better use of geo-information. Its primary task is to develop, standardise and innovate the National Spatial Data Infrastructure. It works to facilitate access to geo-information and the sharing of geoinformation and other types of data. Geonovum also informs government organisations about existing facilities and links parties that require geo-information to those who can help them.

#### Movisie

Movisie – the Netherlands Centre for Social Development – is one of the three organisations that succeeded the Netherlands Institute for Care and Wellbeing (NIZW) in 2007, which was then disbanded.

Movisie is the primary knowledge organisation operating under the Social Support Act [Wet Maatschappelijke Ondersteuning, WMO] and focuses on such social issues as wellbeing, participation, care and personal safety. Movisie gears its services to the needs of the field, and is charged with collecting, enhancing, validating and disseminating knowledge useful to implementing organisations and local councils.

Movisie focuses on collecting, generating and sharing knowledge and on supporting the implementation of that knowledge, calling itself a 'knowledge institute and consultancy service'. Like Vilans and the NJi, Movisie plays a role in bringing professionals together, for example by coordinating digital platforms and organising knowledge-sharing meetings. For example, it manages a database of effective social interventions, i.e. intervention methods that have proven their value.

## NJi

The Netherlands Youth Institute (NJi) is one of the three organisations that succeeded the Netherlands Institute for Care and Wellbeing (NIZW) in 2007, which was then disbanded.

The NJi's mission is 'to promote the healthy development of children and young people and the social and pedagogical quality of the context in which they live'. The NJi therefore focuses on youth and parenting issues, specifically 'by increasing the quality and effectiveness of the services rendered to children and young people and their parents'. Like Vilans and Movisie, the NJi gears its services to the needs of the field, and is charged with 'collecting, enhancing, validating and disseminating knowledge useful to implementing organisations and local councils'.

Besides developing and managing a knowledge base for the youth sector in the form of databases and websites, the NJi is also actively involved in practical improvement projects and knowledge utilisation. To connect professionals and share knowledge with them, the NJi manages online platforms, gives training courses, and offers research, consultancy, and support services. The knowledge that it amasses in this way is then integrated into its knowledge base.

#### Vilans

Vilans is one of the three organisations that succeeded the Netherlands Institute for Care and Wellbeing (NIZW) in 2007.27

Vilans is the centre of expertise for long-term care. It considers how long-term care is organised and the quality of that care. In the latter case, its aim is to improve the provision of care and the quality of

<sup>27</sup> Vilans, Movisie and the NJi were established at that point to operate as decentralised organisations in the care sector, responsible for implementing three pieces of legislation: the Exceptional Medical Expenses Act (AWBZ), the Social Support Act (WMO) and the Youth Care Act (Wet op de Jeugdzorg).

life of people who require long-term care, with an emphasis on organising and promoting self-reliance. The target group for its research consists of employees in the care sector, who can improve their work with the outcomes. Vilans is charged with 'collecting, enhancing, validating and disseminating knowledge useful to the field (implementing organisations and local councils) in these areas'.

In order to disseminate knowledge and link professionals so that they can share what they know, Vilans runs a number of digital platforms (consisting of several websites) where professionals, volunteers and the elderly in care can find information, training and new tools and can communicate with each other.

## Professional research and training organisations

#### Clingendael

Clingendael is the outcome of a merger in 1983 between five organisations active in international relations.

Clingendael is the Netherlands Institute of International Relations. It researches economic diplomacy, international security and conflict management. Its main focus of study is the role and position of the Netherlands. Knowledge about Europe also plays an important role. The organisation combines its research work with training programmes and courses for Dutch and foreign diplomats of today and tomorrow. In addition to education and research, Clingendael also performs contract research for both the public and the private sector. It disseminates the knowledge it has amassed at conferences and seminars.

## Police Academy

The Police Academy was founded in 1992. It was the first time that all police training programmes at both the national and the municipal level were combined into a single institute.

The Police Academy provides training and is organised into 'knowledge networks' [lectoraten]. Its curricula cover initial police training programmes as well as courses and advanced training for police personnel. It runs programmes and courses at secondary vocational, higher professional and academic levels.

In addition, the Police Academy also conducts research in order to support advances in police training and practical police work. It studies how the police force operates today and what improvements can be made to its working methods. It studies police history, forensic research, cybersafety, public order and other relevant subjects. It considers how to improve the effectiveness of investigations and the use of new forensic techniques in the field, for example.

The Police Academy not only carries out research itself but also collects, validates and disseminates knowledge through its digital police database. Its mission is to (help) promote the professionalism and learning capacity of the police force and its people.

## SWOON - NLDA

The Faculty of Military Sciences (FMW) was founded in 2005 as part of the Netherlands Defence Academy (NLDA), also founded in that year. The NLDA's research activities were clustered in a single unit, the FMW. The FMW patterns its organisation on that of a university faculty.

In 2011, the FMW became a legal person: the Foundation for Scientific Education and Research at the Netherlands Defence Academy (SWOON-NLDA). This allowed the FMW's programmes to gain accreditation and made the FMW into an independent unit within the Ministry of Defence.

The NLDA is the Netherlands' military training institute. Within that context, the FMW provides the academic portion of its officer training programmes. It runs three Bachelor's and two Master's programmes. The military portion of the officer training programme is provided by the Royal Netherlands

## 42 Public Knowledge Organisations in the Netherlands

Military Academy (KMA) and the Royal Netherlands Naval College (KIM). Civilians may also enrol in the Master's programmes.

In addition, the FMW conducts research that is compatible with its academic training tasks. Examples include research on military strategy, operations and ethics, civilian-military cooperation, and military logistics. Its research programmes have a duration of approximately ten years.

#### Appendix B Organisations not included in this report

The following groups of organisations were not selected for this report.

- Advisory councils: Councils such as the WRR (Scientific Council for Government Policy) and the Health Council of the Netherlands. Research is a secondary task for these councils (see Advisory Bodies Framework Act [Kaderwet Adviescolleges], 1996).
- Inspectorates: research is a secondary task.
- NWO and KNAW institutes: come under the Dutch Higher Education and Research Act (WHW).
- Rijkswaterstaat: no separate research units (see Decree on organisation of Rijkswaterstaat organisational units, Article 3.7).
- Organisations that have been disbanded: such as the Nederlands Vaccine Institute, which was included in the report Verstand op veilig.
- Top Technology Institutes/Top Societal Institutes: primarily networks that facilitate research.
- National museums: research is a secondary task.
- National Library of the Netherlands: comes under the Dutch Higher Education and Research Act.

The following organisations were considered but ultimately excluded from the final selection for various reasons:

Name of organisation	Reason for exclusion	
Netherlands Centre for Family History (CBG)	Research is a secondary task	
Dutch Centre for Crime Prevention and Safety (CCV)	Research is a secondary task	
De Nederlandsche Bank (DNB)	Research is a secondary task	
Europa Decentraal	Research is a secondary task	
NEN	Research is a secondary task	
National Institute for Family Finance Information (NIBUD)	Research is a secondary task	
NICTIZ	Research is a secondary task	
Cultural Heritage Agency	Research is a secondary task	
Rutgers	Research is a secondary task	
Centre '45 Foundation	Research is a secondary task	
Netherlands Nutrition Centre	Research is a secondary task	
Dutch Metrology Institute (VSL)	Research is a secondary task	
Netherlands Academy for Eating Disorders	Does not undertake research	
ProDemos	Does not undertake research	
Dutch Safety Board	Research only in the event of disaster	
Atria Institute on gender equality and women's history	No systematic relationship with national government	
STOWA - Foundation for Applied Water Research	No systematic relationship with national government; only with water boards	
Verwey-Jonker Institute	No systematic relationship with national government	
Africa Studies Centre	Academic institute, part of Leiden University	
Netherlands Cancer Institute Antoni van Leeuwenhoek		
European Institute of Public Administration	Bears more similarity to a university medical centre	
Dutch Knowledge Centre for Child and Adolescent Psychiatry	An EU organisation	
KIT	A network organisation.	
CLM	An association	
Netherlands Water Partnership	A private foundation	
Koninklijk Instituut voor de Tropen	A network organisation	
Stichting Centrum landbouw en Milieu (CLM)	Deze organisatie is een private stichting.	
Stichting Nederlands Water Partnership	Deze organisatie is een netwerkorganisatie.	

## Appendix C Acronyms and abbreviations

BuZa Ministry of Foreign Affairs

CBS Statistics Netherlands

CCS Central Commission for Statistics

CPB Netherlands Bureau for Economic Policy Analysis

Defensie Ministry of Defence

DLO Agricultural Research Service

ECN Energy Research Centre of the Netherlands

EZ Ministry of Economic Affairs

FMW Faculty of Military Sciences

I&M Ministry of Infrastructure and the Environment

(N)IFV (Netherlands) Institute for Physical Safety

KiM Netherlands Institute for Transport Policy Analysis

KNAW Royal Netherlands Academy of Arts and Sciences

KNMI Royal Netherlands Meteorological Institute

MARIN Maritime Research Institute Netherlands

MNP Environmental Assessment Agency

NcGv Dutch Mental Health Centre

NFI Netherlands Forensic Institute

NIAD Netherlands Institute for Alcohol and Drugs

NIVEL Netherlands Institute for Health Services Research

NIZW Netherlands Institute for Care and Wellbeing

NJi Netherlands Youth Institute

NLDA Netherlands Defence Academy

NLR Netherlands Aerospace Centre

NVWA Netherlands Food and Consumer Product Safety Authority

NWO Netherlands Organisation for Scientific Research

**OCW** Ministry of Education, Culture and Science

PBL Netherlands Environmental Assessment Agency

National Institute for Public Health and the Environment RIVM

**Dutch Council for Social Development** RMO

RPB Netherlands Institute for Spatial Research

**RWT** Legal person with statutory tasks

Netherlands Institute for Social Research **SCP** 

Foundation for Scientific Education and Research **SWOON** 

**SWOV** Institute for Road Safety Research

TNO Netherlands Organisation for Applied Scientific Research

TO2 Organisations for applied scientific research

**TWIN** Total Investment in Research and Innovation

V&J Ministry of Security and Justice

**VWS** Ministry of Health, Welfare and Sport

WHW Higher Education and Research Act

WODC Research and Documentation Centre

ZBO Independent administrative body

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