

RIVM report 278600002/2001

**Policy-dependent determinants of several  
important health problems and related actors  
in policy-making**

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en Milieu

This report concerns a translation of RIVM report 278600001

This research was carried out in the context of an assignment of the Public Health Policy Department at the Netherlands School of Public Health (NSPH), financed by the NSPH and within the context of project number 2786000, 'Effects of prevention'

ISBN: 90-75842-06-6

NUGI: 757

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The translation of this report has been funded by the

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Information on the publication and publisher:

Author(s): F Van der Lucht, J Jansen  
Publisher: National Institute of Public Health and the Environment  
Department for Public Health Forecasting  
P.O. Box 1  
3720 BA Bilthoven  
tel. +31-30-2743826  
fax +31-30-2744450  
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website: [www.rivm.nl](http://www.rivm.nl)

Publication date: October 2001

ISBN: 90-75842-06-6

NUGI: 757

96 pages

This report can be ordered from the NSPH by fax: +31-30-2913242 (att. Intersectoral Policy Office) or e-mail: [nsph@nsph.nl](mailto:nsph@nsph.nl), stating the title: *Policy-dependent determinants for several important health problems and related actors in policy-making*. Report No. 278600002 - GES 017. Reproduction of this report or any part of it is allowed provided the source is acknowledged.

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## Abstract

### **Policy-dependent determinants of several important health problems and related actors in policy-making**

The exploratory study reported here focused on the potential of intersectoral health policy. The study consisted of two parts. The first part included a description of the determinants of five specific health problems (cancer, chronic non-specific lung disease (CNSLD), heart disease, injuries sustained in accidents, and psychiatric disorders). The related actors in policymaking were also identified. The second part of the study focused on assessing the determinants of one or more of these diseases in depth. The objective here was to obtain insights into prioritizing based on potential health benefits. The first part revealed that many departments, from several different ministries, are in a position to contribute to an intersectoral health policy. Some ministries have a special connection to one particular determinant of health, e.g. Agriculture, Nature Management and Fisheries has opportunities in the field of nutrition. There are also ministries that can be of importance for a broad range of determinants, e.g. Education, Culture and Science can play an important role in health education. The Ministry of Finance is also involved in many determinants as a consequence of its tax instruments for pricing policy. The same could be said for ministries involved in control and supervision (Justice and Internal Affairs). In the second part of the study, priority setting for an intersectoral health policy based on potential health benefits is described on the basis of an analysis focused on the determinants of CNSLD. However the requisite data and evidence is often lacking, making it very difficult to set priorities for intersectoral policy using the potential health benefits of interventions on the important risk factors. Nevertheless, smoking and allergens in the indoor environment can be put forward as the determinants of CNSLD that have the greatest potential health gain. In conclusion, there are many opportunities for intersectoral policy, which makes prioritizing a requirement. In addition to potential health benefits, priorities can be set for measures that are not yet in use and for measures that coincide with the targets of other ministries.



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## List of abbreviations

BZK	Ministry of the Interior and Kingdom Relations
CARA	Chronic Non Specific Lung Disease
CHZ	Coronary Artery Diseases
CNSLD	Chronic Non Specific Lung Disease
COPD	Chronic Obstructive Pulmonary Disease
VTV	Department for Public Health Forecasting
DALY	Disability Adjusted Life Years
DGB	Directorate General for the Tax and Customs Administration
DGBEB	Directorate General for Foreign Economic Relations
DGCA	Directorate General for Culture and Conditions of Employment
DGES	Directorate General for Structural Policy
DGFZ	Directorate General for Tax and Customs Policy and Legislation
DGG	Directorate General for Freight Transport
DGID	Directorate General for Industry and Services
DGM	Directorate General for the Environment
DGOOV	Directorate General for Public Order and Safety
DGP	Directorate General for Passenger Transport
DGPJS	Prevention, Juvenile Crime and Sentencing Policy Department
DGRO	Directorate General for Spatial Planning
DGVH	Directorate General for Public Housing
DGPVO	Primary, Special Education and Secondary Education Department
DGW	Directorate General for Science
DGWRR	Directorate General for the Administration of Justice and Legal Aid
DGR	Directorate General for Law Enforcement
EZ	Economic Affairs
Fin	Finance
GES	Health Impact Screening
GVO	Health Education
ICD	International Classification of Diseases, Injuries and Causes of Death
JUS	Justice
LNV	Ministry of Agriculture, Nature Management and Fisheries
MDW	Market Regulation, Deregulation and Quality of Legislation
NSPH	Netherlands School of Public Health
OCandW	Ministry of Education, Culture and Science
PAR	Population Attributive Risks
SZW	Ministry of Social Affairs and Employment
VandW	Ministry of Transport, Public Works and Water Management
VROM	Ministry of Housing, Spatial Planning and the Environment
VVM	Department of Veterinary, Food and Environment Matters

REB	Spatial Economic Policy
RIVM	National Institute of Public Health and the Environment
SEH	First Aid
VTV	Department for Public Health Forecasting
VWS	Ministry of Health, Welfare and Sport
ZBO	Independent Administrative Organ



## Summary

Public health, outside the scope of the health service, is largely influenced by factors such as lifestyle and environmental characteristics, which are largely beyond the influence of the Ministry of Health, Welfare and Sport. However, because of the large potential health gains involved, the Ministry of Health, Welfare and Sport has implemented a so-called Intersectoral Policy Review that specifically targets sector-transcending elements. One instrument in which the Intersectoral Policy Review takes concrete form is Health impact screening, which is used to trace any health effects that derive from policy plans.

This report contains details of a variant of health effect screening that was used to identify the policy disciplines involved in policies relating to health. Using data on five specific health problems (cancer, CNSLD, cardiovascular diseases, accidents, and psychiatric disorders) an analysis was carried out to identify those policy sectors that might be involved in influencing the determinants of these health problems. The purpose of identifying these policy sectors is to provide support for the process of designing the Ministry of Health, Welfare and Sport's Intersectoral Policy Review. The first section is introductory in nature. Section 2 contains details of the way in which the five selected disorders progress to certain clinical pictures that are described more detail. The approach used complies with the ICD coding used in the Department for Public Health Forecasting (VTV) in 1993 and 1997. Working on the basis of the VTV, a determinant profile has been drawn up for these clinical pictures. Specific determinants have been selected from the entire set on the basis of their potential for being influenced. Section 3 indicates the specific options for exerting influence on the determinants. This is based on three groups of policy instruments, *communicative*, *economic* and *legal*. Each of these categories contains both repressive and stimulating instruments, for the purpose of influencing behaviour. For each individual determinant an analysis is carried out to identify the options for exerting influence on each of the areas involved. Once this has been done an attempt is made to establish a link with given policy sectors. The policy sectors are tracked down by examining the mission statements, objectives and job descriptions of the departments and policy departments as presented on the Internet. The analyses reveal that a very large number of policy sectors (60) are potentially capable of influencing the selected determinants. In addition, virtually all ministries (9) could potentially be involved. Some ministries are primarily involved with one specific determinant, as is the case with the Ministry of Agriculture, Nature Management and Fisheries and the nutrition determinant for example. Other ministries and policy sectors can affect a large number of determinants, mainly because these ministries possess the instruments for implementing a Intersectoral Policy Review. Some examples would be education (dissemination of information), Ministry of Finance (pricing policy), justice and police (enforcement and supervision).

The sheer range of policy sectors involved implies that the Intersectoral Policy Review of the Ministry of Health, Welfare and Sport can be broadly applied. If resources are to be more sharply focused then it is necessary to subject the Intersectoral Policy Review to further prioritization. Section 4 addresses the second area of the study. We have endeavoured to

further prioritize the Intersectoral Policy Review on the basis of the potential health gains that can be achieved. In this connection, we have elected to further elaborate CNSLD, a clinical picture that is relatively well understood. Despite the wealth of data available, it proved very difficult to achieve prioritization using this approach. Often this was because the requisite information about prevalences and the level of risk involved was either lacking or could not be used for comparative purposes between individual determinants. Despite these difficulties, two determinants were identified for CNSLD that might be given priority status in a Intersectoral Policy Review. These were smoking and allergens in the indoor environment. With regard to smoking, the best results can be expected from general restrictions on advertizing, price increases and no-smoking zones. In this connection, the Ministry of Finance, Ministry of Education, Culture and Science, and Ministry of Social Affairs and Employment all have an important part to play. The question of allergens in the indoor environment largely falls within the domain of the Ministry of Housing, Spatial Planning and the Environment (Housing). Measures adopted by the above-mentioned ministries can achieve considerable health gains as well as producing major savings for the health service in terms of the costs achieved in treating patients with CNSLD.

## Samenvatting

De volksgezondheid wordt naast de gezondheidszorg voor een belangrijk deel beïnvloed door factoren, zoals leefstijl en omgevingskenmerken, die grotendeels liggen buiten de invloedssfeer van VWS. Omdat op deze terreinen een aanzienlijke gezondheidswinst te boeken is, voert het ministerie van VWS een zogenaamd facetbeleid, waarbij men zich specifiek richt op sectoroverstijgende elementen. Een instrument waarin het facetbeleid geconcretiseerd wordt is de gezondheidseffectscreening, waarmee eventuele gezondheidseffecten van beleidsvoornemens worden opgespoord.

Om inzicht te geven in welke beleidsdisciplines betrokken zijn bij gezondheidsrelevant beleid is een variant op de gezondheidseffectscreening uitgevoerd, waarvan in dit rapport verslag wordt gedaan. Uitgaande van een vijftal belangrijke gezondheidsproblemen (kanker, CARA, hart- en vaatziekten, ongevallen en psychische aandoeningen), is geanalyseerd welke beleidssectoren een rol konden spelen bij de beïnvloeding van de determinanten van deze gezondheidsproblemen. Het identificeren van de diverse betrokken beleidssectoren moet ondersteuning geven bij het vormgeven van het facetbeleid op het ministerie van VWS. Na het inleidende eerste hoofdstuk is in *hoofdstuk 2* de uitwerking beschreven van de vijf gezondheidsproblemen tot enkele nader omschreven ziektebeelden, overeenkomend met de ICD-codering zoals ook gehanteerd in de Volksgezondheid Toekomst Verkenningen (VTV) 1993 en 1997. Op basis van de VTV is voor deze ziektebeelden een determinantenprofiel opgesteld en is binnen de set van determinanten een selectie gemaakt op basis van potentiële beïnvloedbaarheid.

In *hoofdstuk 3* is voor de determinanten weergegeven wat de beïnvloedingsmogelijkheden zijn. Daarbij is uitgegaan van drie groepen van beleidsinstrumenten, te weten *communicatieve*, *economische* en *juridische* instrumenten. Binnen deze categorieën bestaan zowel repressieve als stimulerende instrumenten om gedrag te beïnvloeden. Per determinant is nagegaan wat de beïnvloedingsmogelijkheden op de verschillende terreinen zijn, waarna is gezocht naar een koppeling met beleidssectoren. De beleidssectoren zijn opgespoord door bestudering van missie-statements, doelstellingen en taakomschrijving van de (beleids-) directies van verschillende departementen, zoals die zijn weergegeven op internet.

Uit de analyses blijkt dat een zeer groot aantal beleidssectoren (60) de mogelijkheid heeft de geselecteerde determinanten te beïnvloeden. Daarnaast blijkt dat bijna alle ministeries (9) een potentiële betrokkenheid hebben. Sommige ministeries zijn voornamelijk betrokken bij één specifieke determinant, zoals bijvoorbeeld het ministerie van LNV bij de determinant voeding. Andere ministeries en beleidssectoren kunnen bij een groot aantal determinanten een rol spelen, voornamelijk omdat binnen deze ministeries het instrumentarium aanwezig is voor het voeren van een facetbeleid. Daarbij gaat het bijvoorbeeld om onderwijs (voorlichting), financiën (prijsbeleid) justitie en politie (handhaving en toezicht). De breedte van betrokken beleidssectoren impliceert ook dat het facetbeleid op het ministerie van VWS zeer breed kan worden ingezet. Voor een meer gerichte inzet van middelen is het wenselijk te komen tot een nadere prioritering voor het facetbeleid.

In *hoofdstuk 4* komt het tweede onderdeel van de studie aan de orde. Getracht is tot prioritering voor facetbeleid te komen op basis van potentieel te behalen gezondheidswinst. Daarbij is gekozen voor de uitwerking van één ziektebeeld, te weten CARA, waar relatief veel over bekend is. Ondanks dit blijft het zeer moeilijk om via deze invalshoek tot prioritering te komen, omdat de benodigde informatie over prevalenties en de sterkte van het risico vaak ontbreekt of per determinant niet goed vergelijkbaar is. Bij de aandoening CARA komen desalniettemin twee determinanten naar voren die prioriteit zouden kunnen krijgen in een facetbeleid. Het betreft de determinanten roken en allergenen in het binnenmilieu. Ten aanzien van roken kan het meest verwacht worden van (algehele) reclamebeperkingen, prijsverhogingen en rookverboden, waarbij een belangrijke rol is weggelegd voor respectievelijk de ministeries van Financiën, OC and W en Sociale Zaken en Werkgelegenheid. Allergenen in het binnenmilieu is een probleem dat in belangrijke mate gerekend kan worden tot het domein van het ministerie van VROM (Volkshuisvesting). Maatregelen vanuit bovengenoemde ministeries kunnen resulteren in een aanzienlijke gezondheidswinst en een behoorlijke besparing opleveren voor de gezondheidszorg in de kosten ten gevolge van CARA.

# 1. Introduction

## 1.1 The nature of the problem

Public health, outside the scope of the health service, is influenced by a variety of factors such as lifestyle, the physical environment and the social environment. If these factors could be favourably influenced, this might produce major gains in terms of health. However, these factors are largely beyond the scope of the health service. Any attempt to favourably influence public health therefore requires action in other areas of policy than public health. From the perspective of the Ministry of Health, Welfare and Sport, this means that those attempting to achieve health gains are partially dependent on the cooperation of other ministries. The policy that lies outside the scope of public health but which can nevertheless exert a beneficial influence on health is designated as an intersectoral policy review. The Ministry of Health, Welfare and Sport implements this policy as a derivative of its public health policy. In this connection, the government is specifically addressing those sector-transcending factors that exert an effect on health (Putters and Van der Grinten, 1998).

Various activities are aimed at developing an instrument that can be used to construct an intersectoral policy review (Roscam Abbing et al., 1995; Putters, 1996; Jansen, 1997). The instrument in question is designated Health impact screening. This can then be used to trace any health effects that derive from policy planned by ministries other than the Ministry of Health, Welfare and Sport, after which the policy can be steered as necessary. A GES procedure primarily involves giving notification of policy plans, from which any areas of relevance to health must be selected. A decision is subsequently taken about whether or not it would be appropriate to subject the policy to a subsequent stage of the GES procedure. This next step in the GES procedure consists of a complementary investigation into the cause-effect relationships involved in policy implementation on the one hand and administrative options for influencing policymaking on the other hand (Putters and Van der Grinten, 1998).

In practice it has been shown that virtually all ministries, with the exception of Ministry of General Affairs, have the potential to develop policy of relevance to health issues (Jansen, 1997). However, there is still an incomplete appreciation of which policy disciplines are involved in policies relating to health. Partly with this in mind, the Ministry of Health, Welfare and Sport has approached the Netherlands School of Public Health (NSPH). Within the framework of an intersectoral policy review as a support function, the ministry has requested the NSPH to implement a variant of a Health impact screening. This would be based on specific, major health problems rather than on planned policy. Taking these health problems as a basis, determinants that affect these problems should then be selected. An investigation should then be conducted to identify those policy sectors beyond the scope of

the Ministry of Health, Welfare and Sport in which there are opportunities to influence the determinants in question. The aim is to conduct an investigation into policy-dependent determinants (based on five specific major health problems) and related actors in policy-making. In consultation with the Ministry of Health, Welfare and Sport, the NSPH has selected the following health problems as a starting point: colon cancer and rectal cancer; CNSLD, cardiovascular diseases, accidents, and psychiatric problems.

The purpose of identifying the determinants of the above-mentioned health problems is to determine which policy disciplines are associated with these problems and which ministries are responsible for policy. One purpose of this analysis is to provide insights that can be of use in the design of Intersectoral Policy Review at the Ministry of Health, Welfare and Sport in general. In the short term, these insights may be used in the screening currently being carried out by the NSPH into the coalition agreement and the Budget.

The investigation can be seen as an initial screening of policy sectors that are of relevance to the Intersectoral Policy Review, in which an attempt is made to limit the scope of the issue to some extent. By this means it is possible to take account of the Ministry of Health, Welfare and Sport's requirement that it receive a usable report as soon as possible.

The RIVM's Department for Public Health Forecasting (VTV) has been asked to conduct this investigation.

## 1.2 Method

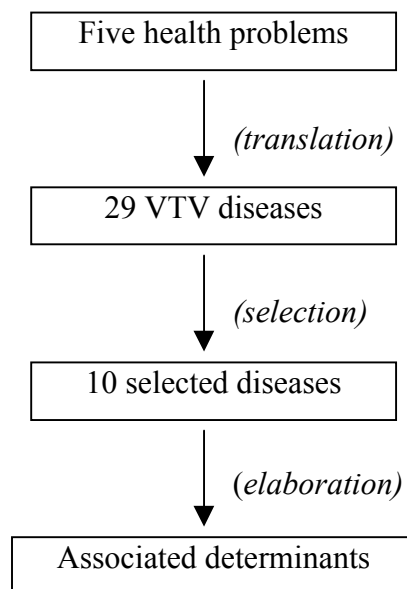
The project consists of two parts. The first part aims to identify those policy sectors that may be of relevance to the determinants of the cited clinical pictures. The second part involves a more detailed description of the determinants on one of these clinical pictures.

### ***Broad description of the determinants of the cited clinical pictures and identification of policy sectors***

#### *a. Disease selection*

The five health problems that serve as a starting point for this investigation are primarily interpreted in terms of the disorders covered in the Department for Public Health Forecasting (VTV). The grouping of disorders used in the VTV conforms with the ICD classification that is commonly used at the international level. Translation of the five health problems into VTV diseases produces a total of 29 different diseases. Given the limited time available, it is not possible to further explore all of these diseases within the context of this investigation. A selection was made by selecting two VTV diseases for each health problem. These diseases were then examined in greater detail. This selection process within each health problem was based on the criterion of relevance to policy. In operational terms this amounted to the burden of illness resulting from a specific disorder and the associated costs borne by the health service. This process resulted in 10 homogenous clinical pictures. Figure 1.1 is a

diagrammatic representation of the method used in this process, starting with the five health problems and terminating with the final identification of the determinants.



*Figure 1.1. Diagrammatic representation of the procedure used to identify the determinants of the five health problems selected.*

The selection was primarily carried out on the basis of the burden of illness of each of the diseases (ranked according to the Disability Adjusted Life Years (DALY) table, VTV – 1997). The burden of illness was chosen as a selection criterion since this is a composite measure of public health, in which data on mortality and morbidity are combined. Such indicators provide information about the severity of a given public health problem, as such they can be used to set policy priorities. The DALY is a measure of the burden of illness in a population. It combines the years of life lost per disease with illness-year-equivalent. This enables a comparison to be made between the burdens imposed by different diseases. A measure such as the DALY enables priorities to be set between categories of disease, for the purpose of prevention and care (Van der Maas and Kramers, 1997). The DALY also contains information about the prevalence or incidence of various diseases (or of their component stages). Commonly occurring diseases with less severe consequences, such as influenza, can generate a burden of illness equal to that of less common health problems with more severe consequences, such as Multiple Sclerosis<sup>1</sup>.

In addition to the DALY, the costs associated with each disorder are also of relevance to policy. In cases where it is difficult to make a selection on the basis of the DALY, the cost to the health service can be used as an additional criterion.

<sup>1</sup> Influenza	Incidence: 1,044,300	DALY: 11,400
Multiple Sclerose	Prevalence: 13,300	DALY: 11,500

The final criterion is that it must be possible, on the basis of the VTV, to trace an unambiguous set of relevant determinants for the diseases. What is needed is an adequate knowledge of the relevant determinants and a well-delineated clinical picture with an unambiguous aetiology. This is because, in the case of a heterogeneous, poorly-delineated or described disorder, it is no simple matter to select the determinants that are relevant to the disorder in question. Equally unclear is the way in which the various determinants contribute to the health problem itself.

*b. Description of the determinants*

First of all, the VTVs of 1993 and 1997 are used to sketch out a *determinant profile* for the five selected clinical pictures. The objective is to chart the relationships between determinants within an individual disease and between the determinants of different diseases, as well as mapping out common determinants. To this end, use is made of the stratification within VTVs conceptual model.

*c. Relationship to policy*

Several relevant determinants are selected from the set of determinants on the basis of their 'susceptibility to being influenced', i.e. their potential for being influenced by interventions. Next, a number of policy sectors are indicated that might be involved in influencing these determinants. Before the policy sectors could be mapped out, a list was made of the ways in which the determinants might be influenced. The government possesses various policy instruments for this purpose. Van der Doelen (1993) classified these instruments into several broad categories. In this connection, some distinction is made between stimulating and repressive instruments on the one hand and communicative, economic and legal instruments on the other (see diagram).

	<b>Stimulating</b>	<b>Repressive</b>
<b>Communicative</b>	Disseminating information	Propaganda
<b>Economic</b>	Subsidy	Levy
<b>Legal</b>	Similarity	Command, prohibition

Incentive policy instruments can be used to stimulate factors that promote or protect health. The purpose of repressive instruments is to prevent or reverse the occurrence of factors that might damage health or pose a risk to it.

The government's communicative instruments include the dissemination of information and propaganda. In this diagram, propaganda is seen as the repressive variant of the range of communicative instruments. This involves a selective representation of information to convert people to certain principles or ideas. In the context of this exercise, repressive communication should be particularly associated with commercials for products that can be damaging to health for example. Communicative policy instruments are used to bring about changes in behaviour. These instruments are also used to support other instruments, such as legislation.



The economic policy instruments aim to achieve behavioural changes by means of financial stimuli. The effect of such stimuli is dependent on the financial position of the target group. Economic instruments include levies, funding incentives (including subsidies) and the allocation or re-allocation of resources. Subsidies are used to stimulate health promoting factors. Levies are used to discourage certain behaviour, thereby promoting healthy alternatives. Tax facilities or tax reduction is used to achieve given policy objectives. Making resources available to achieve health-promoting facilities (such as sport facilities) can also be considered to be part of the range of economic instruments.

The range of legal instruments includes legislation, in which the government draws up a system of restrictive and/or prohibitive rules. There are also so-called *horizontal* legal instruments, in which equally important agreements or covenants are made between parties. In addition to drawing up legislation, the enforcement of rules is also important. In addition to unilateral (repressive) *enforcement* there are also options for self-regulation by any social organizations that may be involved, for example. One such example is the Advertising Standards Committee, which takes steps to protect consumers. Covenants can also be seen as incentive-type legal instruments.

Legal instruments can also be used to support communicative instruments. In this way, guidelines for the provision of information or for advertizing can be laid down in law or in covenants. One such example is the covenant on school sponsorship, which contained agreements concerning sponsorship of education and within education.

The options for exerting influence in the above-mentioned areas have been listed per determinant. Each list is structured to conform with the above-mentioned classification (communicative, economic and legal). The next step was to find a link between these options to various policy sectors. The policy sectors were traced by studying the mission statements, objectives and task descriptions of the departments and policy departments of the various ministries. This information was primarily obtained via the Internet (ministry sites and that of the State directory (SDU)).

The linkage of determinants to policy sectors has resulted in a summary of actors in policy-making that may be able to contribute to the intersectoral policy review. The question of whether or not these actors actually implement policies of relevance to health matters is not considered here.

### ***More 'in depth' description of determinants of one of the clinical pictures***

In addition to the broad description, as outlined above, one of the clinical pictures was selected in order to examine the options for achieving prioritization on the basis of the potential health gains. Since this approach takes more time than the first part of the project, this exercise is limited to a single disorder (about which the RIVM has some knowledge of the relevant determinants). Similar analyses for the other clinical pictures will require that appropriate expertise be sought outside the RIVM.

The criterion used in the selection of the clinical picture that was to be examined in greater detail was that there should be sufficient expertise available concerning the determinants in question. Another requirement was that the determinants of the clinical picture should also originate from different areas. For example, besides determinants in the area of lifestyle, there are also determinants relating to the physical environment.

This analysis provides information that can be of use in setting priorities with regard to determinants that are to be influenced by an intersectoral policy review. In this connection it is necessary to have quantitative information concerning the contribution made by the determinant to the health problem. In order to be genuinely helpful in the setting of priorities it is also necessary to have information regarding the efficacy of the means used to exert influence. This might be a useful topic for a follow-up phase of this project.

A follow-up phase could (in the context of VTV-2001, for example) also be used to investigate estimates of the potential health gains to be obtained, contrasted where possible against available data concerning the efficacy of interventions. This can be used as another approach to the process of setting priorities within an intersectoral policy review.

### **1.3 Structure of the report**

Following this introductory section, section 2 traces the determinants that influence the five health problems in question (on the basis of the knowledge obtained from the Department for Public Health Forecasting (VTV-1993 and VTV-1997)). The exogenous determinants described, which are susceptible to influence, serve as a starting point for the exercise in the third section. That contains a list of the means used to exert influence, along with the associated policy sectors. The final diagram lists the following three categories of information per determinant: means used to exert influence, policy sectors and actors in policy-making.

The fourth section contains a more detailed examination of CNSLD. This combination of quantitative information about the determinants of CNSLD is used to indicate the options for setting priorities for determinants that can be influenced by an intersectoral policy review.

## 2. Description of the determinants of five health problems

### 2.1 Diseases and disorders in VTV-1997

As described in the previous section, the five health problems are translated into VTV diseases (in accordance with the ICD classification), which produces a number of homogenous clinical pictures. A selection was then made from the clinical pictures obtained by this means, based on burden of illness and cost.

Table 2.1 shows the VTV clinical pictures that correspond to each health problem, and the associated burden of illness in DALYs. Where possible, mention is also made of the prevalence or incidence and the costs to the health service of each clinical picture. The cost to the health service is also given, per main group, in the column labelled 'health problem'. In addition, there is also an indication of the percentage of the total cost to the health service. The 1993 VTV report contains descriptions of 44 diseases and disorders. In the 1997 VTV report this list has been extended to include another eight disorders. In 1993, the criterion for selecting disorders was their contribution to total morbidity and mortality. The criteria for the extension of the list in 1997 were: the extent to which the disease and its consequences could be prevented by prevention and care and by high costs in the health service. The diseases are ranked according to the seventeen main groups from the ninth revision of the International Classification of Diseases, Injuries and Causes of Death (ICD-9).

In the interests of completeness, the table also includes diseases not mentioned by the Ministry of Health, Welfare and Sport. The translation of the five health problems results in 23 VTV diseases (the other six types of cancer have been omitted here). The majority of these diseases come under accidents or psychological problems. The other three health problems contain a limited number of VTV diseases.

Intestinal cancer covers both colon cancer and rectal cancer. The burden of disease, expressed in DALYs, relates to both types of cancer. Asthma and chronic bronchitis are considered separately for the purposes of calculating the DALYs. The DALYs that result from CNSLD can be calculated by adding these two amounts together.

No DALYs are available for industrial accidents, sports accidents, suicide and injuries as a result of violence.

The burden of illness resulting from the broad problems associated with children and adolescents is not expressed in DALYs due to the lack of the requisite information in this area.

Table 2.1: Selected health problems formulated by the Ministry of Health, Welfare and Sport, in VTV, prevalence, costs and DALYs

Health problem, formulated by the Ministry of Health, Welfare and Sport (costs to the health service in millions of guilders; as a percentage of the total)	Disease (VTV; in accordance with ICD classification)	Prevalence <i>Incidence</i>	Cost to the health service, in millions of guilders	DALY <sup>*</sup>
Cancer (lung cancer and intestinal cancer) (2,335; 3.9%)	- oesophageal cancer	700	43	14,1300
	- stomach cancer	8,1300	78	26,1600
	- colon and rectal cancer	46,1400	240	60,1500
	- lung cancer	18,1500	224	123,1300
	- skin cancer	26,1500	<sup>c</sup>	11,1800
	- breast cancer	72,1500	253	83,1700
	- prostate cancer	18,1200	120	24,1400
	- non-Hodgkin's lymphoma	7,1800	61	18,1300
CNSLD (1,034; 1.7%)	- asthma	172,500	1,034	(13,700)
	- chronic bronchitis	290,100	(CNSLD)	141,200
Cardiovascular diseases (6,214; 10.5%)	- coronary artery diseases	154,400	1,481	265,200
	- heart failure	93,500	647	66,500
	- stroke	97,200	1,919	169,600
	- aneurysm of the abdominal aorta	8,210	-	(12,600)
Accidents (2,519; 4.2%)	- hip fracture	15,300	779	(1,900)
	- traffic accidents	200,900	404	72,800 <sup>a</sup>
	- industrial accidents	201,900	(other: 336)	(14,900) <sup>a</sup>
	- domestic accidents	1,630,300	accidental fall: 1161	
	- sport accidents	804,900	deliberate injury: 618)	
	- suicide (attempted)	17,400		
	- violence	<sup>b</sup>		
Psychological problems (13,729; 23.1%)	- dementia	58,000	3,309	62,300
	- schizophrenia	26,200	838	12,800
	- depression	484,200	955	111,700
	- anxiety disorders	1,273,500	392	218,900
	- alcohol dependence	300,400	486	(165,200)
	- mental handicap, slight	49,600	4,790	14,400
	- mental handicap, moderate	49,700	2,960	30,200
	- psychological problems in young people	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>

<sup>a</sup> domestic accidents and recreational accidents, based on consequences lasting more than one year; <sup>b</sup> no unambiguous figures available; <sup>c</sup> cost not calculated

- DALY= Disability Adjusted Life Years, made up of lost years of life and illness-year-equivalents (number of years of life with disease, weighted for the severity of the disease); the figures in brackets are only based on illness-year-equivalents, partly because the number lost years of life lost is negligibly small.

The psychiatric problems experienced by children and adolescents cover a broad area. They actually span the entire spectrum of behavioural and emotional problems, or circumstances that affect the psychological wellbeing of children.

## 2.2 Selection of diseases and disorders

For each health problem, no more than two VTV diseases are selected for further examination. The selection procedures for each individual health problem are discussed below.

### *Cancer*

Further details have already been given for individual diseases within the range of cancers, which simplifies the selection considerably. As has been indicated, there is marked interest for the further elaboration of intestinal cancer and lung cancer. Based on the DALYs and the costs for the health service, it emerges that these VTV diseases are relatively important in terms of their relevance to policy, which therefore justifies the choice made by the Ministry of Health, Welfare and Sport. Proportionally, breast cancer also appears to result in a high burden of disease and considerable costs. However, relatively little is known about the determinants of breast cancer.

### *CNSLD*

Similarly, in the case of CNSLD, further selection is not required. CNSLD is subdivided into asthma and chronic bronchitis. Since they have a common symptomatology, both diseases are often grouped together under the umbrella term of CNSLD.

### *Cardiovascular diseases*

As far as the cardiovascular diseases are concerned, there are two diseases that stand out in terms of burden of disease and cost. These are coronary artery disease and stroke. Coronary artery disease plays a prominent part in the aetiology of heart failure. This means that all the determinants of coronary artery disease are also of relevance to heart failure. The same determinants have been shown to be important for aneurysms of the abdominal aorta. The determinants of the selected disorders 'coronary artery disease' and 'stroke' show a marked overlap with determinants of other cardiovascular diseases. On the basis of the above information, coronary artery disease and stroke have been selected for further elaboration.

### *Accidents*

The category 'accidents' is further subdivided according to cause. The clearest accident is Traffic Accidents and it also produces the greatest burden of illness. As regards accidents in the DALY calculation, however, only those accidents are included whose repercussions last for more than 1 year. The repercussions of many accidents are felt for a much shorter period

of time. This is particularly true of domestic accidents. This also becomes clear when the aspect of cost is taken into consideration. Accidental falls cost the health service NLG 1.16 billion. However, the classification of accidents on the basis of cost does not correspond to the VTV disease classification. Some accidental falls fall within the category of domestic accidents. These accidents are those that are not caused by traffic, labour or medical procedures. Only a small portion of these accidents occur in the domestic situation. In addition, such accidents also occur elsewhere, as in the case of sports injuries and falls that occur outdoors. Domestic accidents cover a comprehensive range of diverse events, with a large number of varied determinants. The framework of this investigation would require further restriction of the accident category. The information regarding burden of illness and cost, derived from the VTV, is not suitable for this purpose. However, details of the cost per VTV disease are provided in a publication of the Consumer Safety Institute (Den Hertog et al., 1997). Furthermore, this does not combine sports injuries with domestic accidents (see table 2.2).

*Table 2.2 The cost of various accidents to the health service.*

Accident	Cost to the health service in NLG millions
traffic accidents	440
industrial accidents	57
domestic accidents	1000
sports injuries	395

source: Den Hertog et al., Consumer Safety Institute 1997.

The table shows that the majority of costs sustained by the health service as a result of accidents are attributable to domestic accidents. It has therefore been decided that, in addition to traffic accidents, domestic accidents will also be selected for further elaboration in this investigation.

### *Psychological problems*

The greatest burden on illness in the area of psychological problems is associated with anxiety disorders. However, very little is known concerning the determinants of these disorders. The primary prevention of anxiety disorders is virtually impossible (VTV-1997 page 314). Accordingly, anxiety disorders are not eligible for selection in this investigation. Alcohol dependence and depression are also associated with relatively high burdens of illness. However, in terms of cost, these diseases pale into insignificance beside dementia and mental handicaps. However, little is known about determinants of these disorders that are susceptible to influence. Given the relatively low burden of illness involved, it has been decided to exclude dementia and mental handicaps from this investigation. Depression and alcohol dependence are the only psychological problems that have been selected for further analysis.

On the basis of the above considerations, the following disorders have been selected for further analysis:

1. colon cancer and rectal cancer
2. lung cancer
3. CNSLD (asthma and chronic bronchitis)
4. coronary artery diseases
5. stroke
6. traffic accidents
7. domestic accidents
8. depression
9. alcohol dependence

The determinants of these nine diseases will be discussed in the following paragraph.

## **2.3 Determinants of the nine selected disorders**

A distinction is drawn in the literature (Maas et al., 1997) between endogenous and exogenous determinants of health. The endogenous determinants are further classified into genetic factors and acquired characteristics. The exogenous determinants can be subdivided into lifestyle, physical environment and social environment. An individual's state of health can be influenced via exogenous and, at a later stage, via endogenous determinants. There are also exogenous determinants, such as behaviour in traffic, that can have a direct influence on an individual's state of health. Since the policy sectors outside the Ministry of Health, Welfare and Sport are mainly able to influence exogenous determinants, the latter are the focal point of this investigation.

In the case of many determinants it is not entirely clear how they are related to given diseases. They are often said to have a possible influence.

The information given below, which refers to the determinants of various disorders, was derived from Department for Public Health Forecasting reports (1993 and 1997).

### **2.3.1 Determinants of colon cancer and rectal cancer**

It is becoming increasingly clear that colon cancer and rectal cancer are caused both by hereditary factors and nutrition. There is probably an interaction between the influence of nutrition and the individual's genetic constitution. Nutritional factors can have both a positive and a negative influence on the development of intestinal cancer.

Some specific nutritional determinants that can increase an individual's chance of developing intestinal cancer are: fat consumption (although it is not clear which forms of fat or fatty acids are responsible), animal proteins (possibly in the form of red meat).

Nutritional determinants that can reduce the chance of developing intestinal cancer are: polysaccharides of vegetable origin. Food that is rich in vegetables and fibre-rich grain products is said to have a protective action. Much research remains to be done into the causal relationship between nutrition and intestinal cancer. As a result, we cannot reach an entirely clear verdict at this stage. In any event, it is reasonable to assume that nutrition is involved in

the development of intestinal cancer. Some other factors that could lead to an increased risk of intestinal cancer are:

- alcohol consumption
- physical inactivity
- being overweight (especially due to abdominal fat)
- prolonged smoking (>35 years)

*exogenous determinants of colon cancer and rectal cancer:*

- nutrition (+)
- nutrition (-)
- alcohol consumption
- physical inactivity
- smoking

Of all of these factors, being overweight can be considered as endogenous. Nutritional habits and physical quality can, through an individual being overweight, exert an influence on the development of intestinal cancer and rectal cancer. Recent indications have produced stronger evidence that intestinal cancer has its roots in a genetic predisposition, combined with an unhealthy lifestyle.

### 2.3.2 Determinants of lung cancer

Smoking tobacco is the most important determinant of lung cancer. More than 80 per cent of all cases of lung cancer can be ascribed to this. The amount of tobacco smoked and the number of years for which they have been smoking affect an individual's chances of developing lung cancer. Exposure to environmental smoke may also affect an individual's chances of developing lung cancer.

Exposure to hazardous substances plays a part in about 10 percent of all cases of lung cancer. In some professions, people can be exposed to substances such as asbestos, arsenic, nickel and chromium, which can affect an individual's chances of developing lung cancer. Exposure to radon gas, generally in the domestic environment, can also be involved.

*exogenous determinants of lung cancer:*

- nutrition (-)
- smoking
- environmental smoke
- exposure to hazardous substances (asbestos, radon gas)

There is some evidence to suggest that the consumption of fruit and vegetables (particularly Beta carotene and Vitamin A) has a slight protective effect.

### 2.3.3 Determinants of CNSLD

It is quite probable that both endogenous and exogenous factors are involved in the development of CNSLD. Endogenous factors relate to the sensitivity of the bronchi to exogenous stimuli. Two endogenous factors have been identified, namely allergy and hyperreactivity. Allergic individuals have become oversensitive to certain allergens such as dust mites, pollen or pets. Hyperreactivity is a sensitivity to all sorts of non-allergenic stimuli.

The most important exogenic determinant for the development of CNSLD is smoking. In addition, air pollution both in the outdoor and indoor environment is also involved:



- air pollution in the outdoor environment
  - OZONE (in the summer)
  - SO<sub>2</sub>, NO<sub>2</sub> and acidic aerosols in the winter.
- air pollution in the indoor environment
  - tobacco smoke in the environment
  - NO<sub>2</sub> (such as geysers without a vent)
  - dust
  - humidity
  - mould
  - dust mite
- air pollution in the workplace
  - dust
  - gases and vapours

Exogenic determinants of CNSLD:

- smoking
- smoke in the environment
- allergens (dust mite, pollen, pets)
- air pollution indoors
- air pollution outdoors
- air pollution in the workplace

### 2.3.4 Determinants of coronary artery disease

The most important determinants of coronary artery disease are total cholesterol and HDL cholesterol, blood pressure and smoking. Coronary artery disease has both endogenous and exogenous determinants.

Endogenous determinants are:

- total cholesterol (hypercholesterolemia)
- HDL cholesterol (reduced)
- Blood pressure
- haemostasis (coagulation factors)
- glucose tolerance
- being overweight.

*exogenic determinants of coronary artery disease:*

- nutrition (+)
- nutrition (-)
- alcohol consumption
- physical inactivity
- smoking
- mental stress

The most important determinant for total cholesterol is the amount of saturated fat in the diet. In addition, the total cholesterol level can be increased by smoking and by being overweight, which also tend to reduce the HDL level. Physical activity and moderate alcohol consumption have a favourable influence on the HDL cholesterol level.

Various foods have been associated with increased blood pressure (alcohol, large amounts of liquorice, salt), while a diet rich in fruit and vegetables, physical activity, optimal body weight and the absence of stress show a favourable relationship with blood pressure.

The most important determinants of glucose tolerance are being overweight, abdominal fat distribution, physical inactivity and diet (saturated fat and dietary fibre). There are also indications that smoking, alcohol consumption and birth weight may also be involved.

Determinants of excessive weight (which also influence blood pressure, cholesterol levels and glucose tolerance) are dietary habits (energy capture and fat consumption), physical activity and smoking (as well as giving up smoking).

Various exogenic determinants have been cited above as being determinants of the endogenous determinants. To summarize, these are the following factors:

- smoking (giving up smoking can also cause individuals to become overweight)
- physical inactivity
- alcohol consumption (moderate consumption has a beneficial effect on HDL cholesterol, alcohol consumption has an adverse effect on glucose tolerance)
- dietary factors (saturated fats, fruit and vegetables, folic acid, salt consumption, liquorice)
- mental stress.

### 2.3.5 Determinants of stroke

The determinants of stroke correspond to the determinants for coronary artery disease listed above. The most important risk factors are: hypertension, smoking, being overweight, diabetes, glucose intolerance, atrial fibrillation, experiencing a TIA or CVA, narrowing of the internal carotid artery, presence of cardiac disease. In addition, lifestyle factors play an important part, such as alcohol consumption, salt consumption, physical inactivity and, possibly, the consumption of fruit and vegetables.

#### *exogenic determinants of stroke:*

- nutrition (+)
- nutrition (-)
- alcohol consumption
- smoking
- mental stress

### 2.3.6 Determinants of traffic accidents

Injuries resulting from accidents have several overlapping determinants. In all accidents age, sex and alcohol consumption play a major part. In the case of traffic accidents, alcohol consumption is a relevant risk factor.

In general, the use of medication and an individual's socio-economic status also appear to be determinants of injuries resulting from accidents.

With all injuries resulting from accidents, in addition to factors specific to the individual concerned, environmental factors also play a significant part.

Road safety is, of course, a major determinant in traffic accidents. This is partly dependent on the situations that cause problems for traffic (junctions, road surface). In addition, driving behaviour plays an important part.

VTV-1997 examines driving that is regulated by statutory limits and/or obligations and for which sufficient quantitative data are available. The determinants for driving behaviour that are discussed are:

- alcohol consumption
- behaviour regarding speed
- use of safety measures (seat belt, child safety seat and helmet)
- use of medication and drugs

#### *exogenous determinants of traffic accidents:*

- road safety
- driving behaviour, including:
  - behaviour regarding speed
  - use of traffic safety measures
  - alcohol consumption
  - use of medication / drugs

### 2.3.7 Determinants of domestic accidents

In domestic accidents also, age, sex and alcohol consumption play a major part. In addition, environmental factors are also important. Falls outdoors may be related to the quality of the road surface and that of the street lighting. The design and maintenance of a house is an important determinant of domestic accidents that occur indoors. VTV does not go into details concerning the determinants of domestic accidents.

Further sub-classification of domestic accidents is required in order to achieve a sharp delineation of determinants. A publication produced by the Consumer Safety Institute sub-divides domestic accidents into various categories (Den Hertog et al., 1997). These categories are shown in table 2.3. It also shows, for each type of accident, how many victims were treated in hospital accident and emergency departments (AED).

Table 2.3 Number of victims per type of domestic accident (Den Hertog et al., 1997).

domestic accident	Number of victims seen in AED department
- fall on level surface in and around the house	59,000
- fall on level surface on street, carriageway or pavement	47,000
- fall from stairs	30,000
- accidents with bicycles and mopeds (one-sided)	56,000
- accidents involving furniture	31,000
- accidents involving dogs	16,000
- burns	12,000
- poisonings	1,700
- DIY accidents	24,000
- Accidents involving glass	25,000

#### *exogenous determinants of domestic accidents:*

- safety and quality of the layout of the domestic environment (home, stairs, furniture, glass/windows, public highway)
- safety and quality of consumer goods (bicycle, moped, tools (during DIY), poisonous substances, flammable substances)
- dog bites

For each type of accident it is possible to draw up a list of factors that affect safety. This results in a comprehensive list of determinants of domestic accidents. These determinants are summarized in the accompanying text box.

### 2.3.8 Determinants of depression

The presumed determinants of depression are social and biological in nature. The emphasis placed upon them varies over time. A recent approach to depression was based on a bio-psychosocial model. Here, depression is seen as a genetically determined response pattern. This pattern can emerge under the influence of factors that increase vulnerability, or factors whose function is provocative, sustaining or restorative. Factors governing social vulnerability include sex (female) and marital status (single people). Vulnerability increases the chance that depression will develop in response to drastic or threatening events. Thematic report IV by VTV-1997 provides the following list of highly probable risk factors for the development of depression:

- experience of loss in early childhood (particularly the death of the mother)
- child abuse and neglect
- parent with severe depression or addiction
- long-term problems with a relationship
- daily problems of a chronic nature
- a negative self-image
- a tendency to think negatively
- lack of problem-solving skills and social skills
- lack of social support.

*exogenous determinants of depression:*

- life events
- family problems
- social support

Experiences of loss in early childhood can be seen as drastic and threatening events. These are also referred to as life events. Child abuse and neglect, parents with severe depression, relationship problems and daily problems are things that can be bundled together under the title of family problems. A negative self-image, an inclination to think negatively and social skills can be seen as a personal characteristic. In this sense, they are endogenous determinants of depression. The risk of depression is particularly elevated when the cited factors occur in combination.

### 2.3.9 Determinants of alcohol dependence

There are various theories that explain the development of alcoholism. VTV-1993 cites social and environmental factors as determinants, in addition to hereditary and socio-psychological factors. The following socio-cultural determinants are cited:

- reactions of the alcoholic's social circle
- cultural variation in drinking habits
- social background
- group standards concerning alcohol consumption
- social isolation and rejection.

*exogenous determinants of alcohol dependence:*

- a positive attitude to substance abuse
- family problems
- influence of contemporaries
- rules and laws (tax, sales restrictions)
- availability

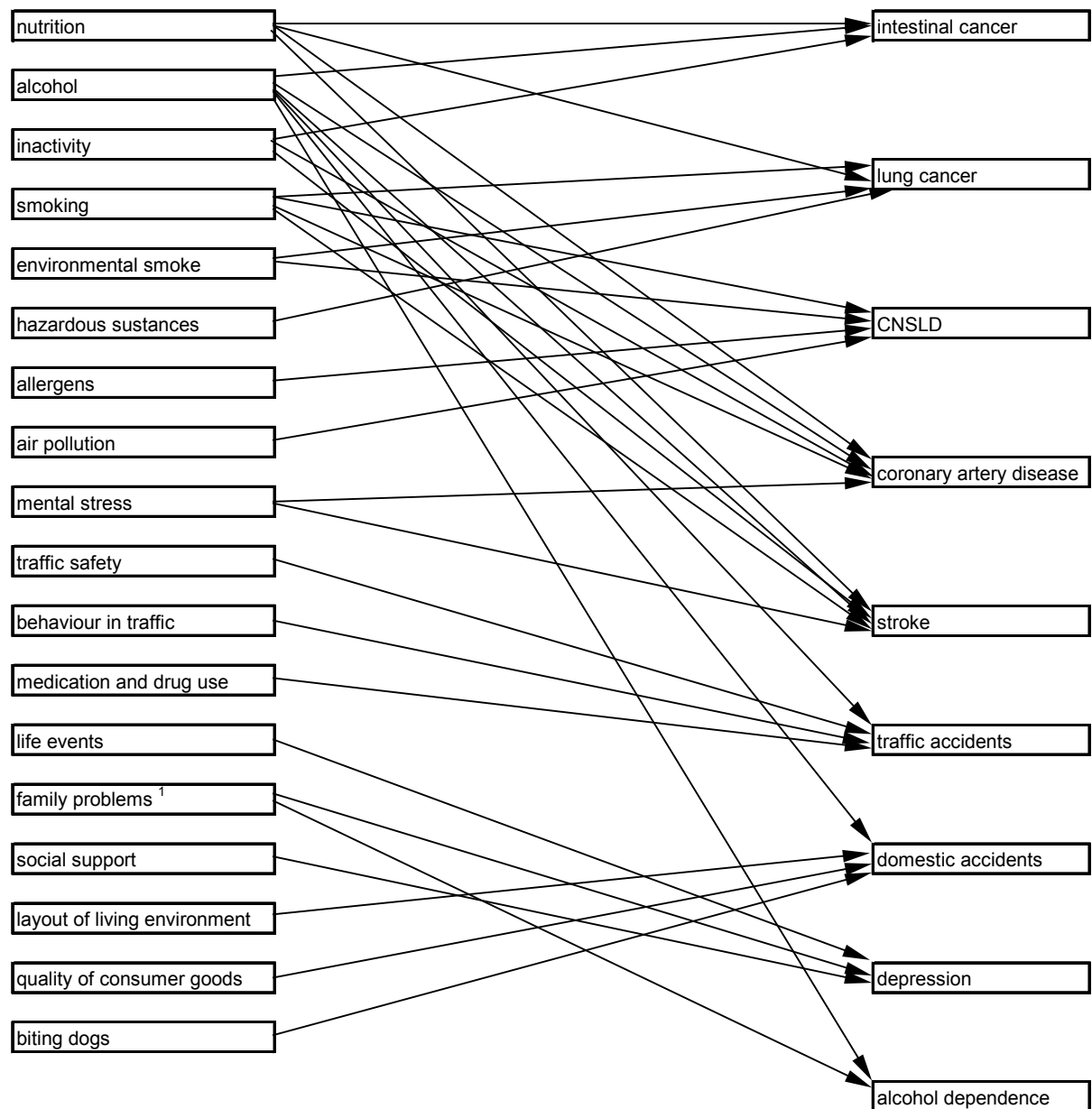
These are all factors that can promote the demand for alcohol. Naturally, the availability of alcohol-containing drinks also has a part to play. The alcohol limitation policy endeavours to restrict both supply and demand.

The Trimbos institute has published a document (Van Gageldonk and Cuypers, 1998) which lists the risk factors for substance abuse. In addition to risk factors relating to the affected individual, this also cites environmental and contextual risk factors. The factors that relate to the individual can be subdivided into biomedical factors (including genetic factors), early and persistent behavioural problems, substance abuse at an early age, later problems, education and a positive attitude towards substance abuse. The biomedical factors would be the endogenic determinants. Early and persistent behavioural problems, as well as substance abuse at an early age can be regarded as a forerunner of later problems and can therefore not be regarded as exogenous determinants that are susceptible to being influenced.

Environmental factors include factors both inside and outside the family and the influence of contemporaries. The contextual factors relate to laws (tax, restriction of sales), standards and availability.

### **2.3.10 Summary of the determinants of the selected disorders**

The summary of determinants of the nine clinical pictures shows that different disorders have certain determinants in common. Thus smoking, for example, is a determinant for intestinal cancer, lung cancer, CNSLD, coronary artery disease and stroke. The relationships between the exogenous determinants and the selected disorders is summarized in Figure 2.1. Endogenous determinants are omitted from this figure. In several cases, the relationship between exogenous determinants and health problems involved endogenous determinants. The endogenous determinant of excessive weight, for example, affects the development of intestinal cancer, lung cancer, coronary artery disease and stroke. It is itself influenced by the determinants nutrition, inactivity and smoking. In this model, some of the listed determinants of alcohol dependence could be used to replace the determinant alcohol. The factors of attitude to alcohol, influence of contemporaries, rules and laws, as well as availability have therefore been omitted from the figure. However, these factors are considered when elaborating the options for influencing alcohol consumption.



<sup>1</sup> personal problems, relationship problems, daily problems and family problems are combined

*Figure 2.1 Selected determinants and diseases*

The determinants found for the nine clinical pictures do not correspond to the determinants dealt with in the VTV. These are the determinants of accidents, with the exception of behaviour in traffic, and psychological disorders that are not discussed in the VTV. Of the remaining determinants, mental stress and allergens are not dealt with explicitly in the section on determinants. Hazardous substances and air pollution are classified as chemical factors in the physical environment. In addition to lifestyle and physical environment, the VTV describes yet another group of exogenous determinants namely the social environment, including socio-economic status, ethnic background and work. Figure 2.2 shows the selected determinants as they appear in figure 2.1, converted to VTV determinants (groups). The number combinations for the determinants refer to the section in thematic report I of VTV-

1997 (The state of health: an update). Wherever a selected document in the VTV is not dealt with as a separate determinant, the number combination is supplemented with an 'x'.

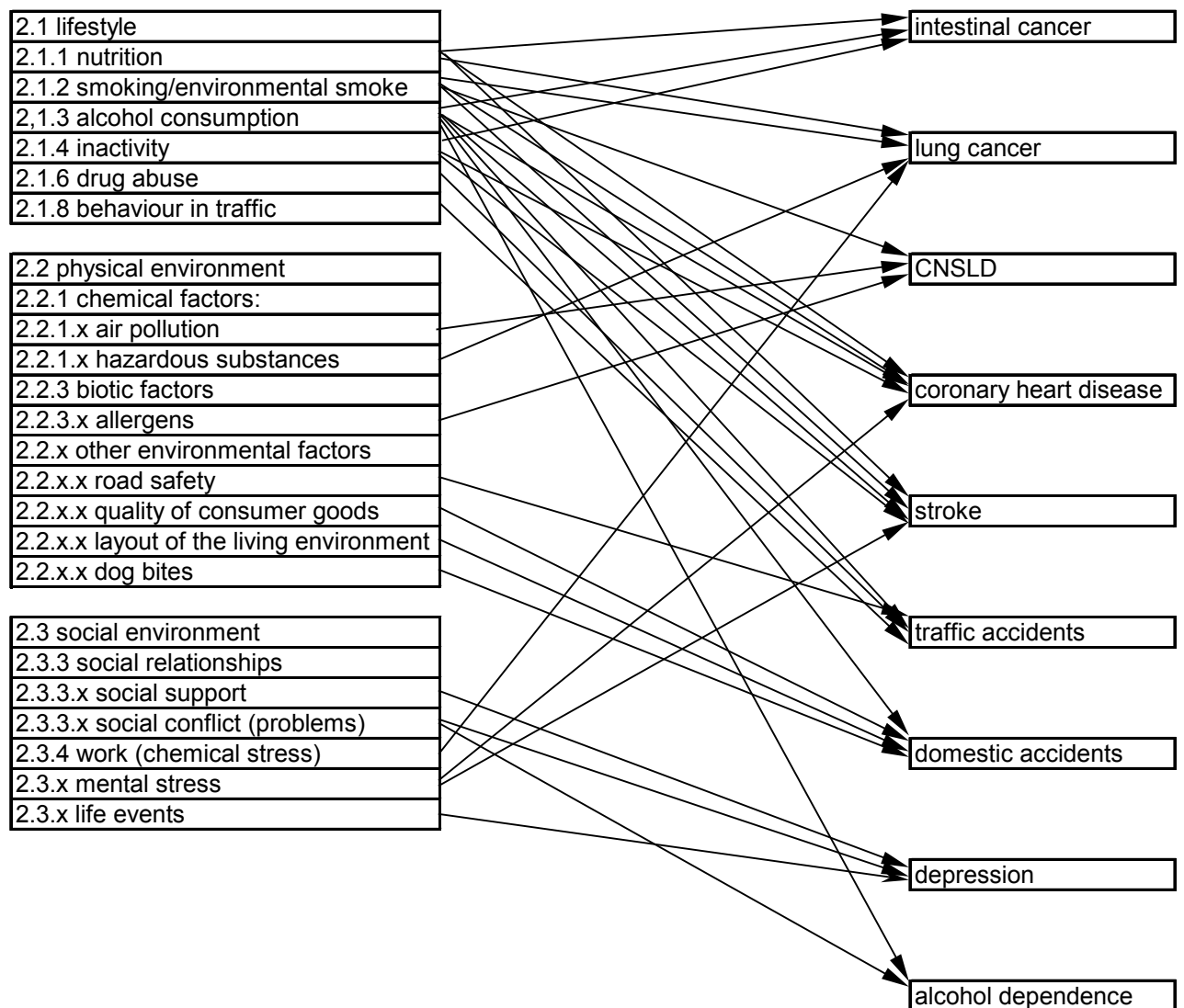


Figure 2.2 Determinants in VTV terms and diseases





## 3. Determinants and actors in policy-making

### 3.1 Nutrition

#### *communicative*

In the area of the range of communicative instruments, the government is able to inform the public about healthy and unhealthy nutritional products. In this way it is possible to affect both knowledge and attitudes. The ministry of Health, Welfare and Sport plays a major role in disseminating information about public health. In addition, other ministries actively contribute towards informing the public about nutrition. For example, education has a part to play here (Ministry of Education, Culture and Science). Finally, there is the information office for nutrition, that is part of the Ministry of Agriculture, Nature Management and Fisheries. Information can also be provided about the production of healthy food, thereby increasing public knowledge about the production of healthy food. The Ministry of Education, Culture and Science and the Ministry of Agriculture are able to promote this. Another communicative instrument is the provision of product information (labelling) about any damaging effects on health of the contents of certain products, this enables consumers to opt for healthy food. Agreements concerning product information can be shaped in collaboration with the Ministry of Economic Affairs.

In addition to the communicative policy instruments that act as an incentive, there are also repressive instruments. Advertizing and/or sponsoring unhealthy products can be restricted or prohibited. Advertizing policy is a component of media policy, and as such is the responsibility of the Ministry of Education, Culture and Science.

#### *economic*

It is possible to influence consumer choice by means of financial incentives. The price of unhealthy food can be increased and the price of healthy food lowered by imposing duties on unhealthy food products or by adjusting consumer tax. Policy in the area of taxes and duties is the responsibility of the Ministry of Finance. Subsidies can also be used to reduce the price of making healthy food. Some options might be measures to provide an incentive or subsidies for the producers of healthy food and for those selling healthy food. The Ministry of Agriculture, Nature Management and Fisheries and the Ministry of Economic Affairs could play a part in this.

*legal*

Legal rules or agreements can also be used to influence the determinant of nutrition. In this way, sales limitations can be introduced for example. Shop opening times can be adjusted and agreements can be made concerning the locations in which the sale of unhealthy food is permitted. This policy can be shaped by the Ministry of Economic Affairs. Careful note should also be taken that this often involves opposing economic interests. In the context of economic growth and employment, stimulating the setting up of new companies or shops is often an attractive proposition. From the perspective of health considerations, some restraint in the building policy for the producers of unhealthy food would be a good thing.

Furthermore, rules can be drawn up regarding the production, transport, storage and ingredients of food. The Ministry of Health, Welfare and Sport has considerable influence in this area. This is monitored by the Health Protection, Commodities and Veterinary Health Inspectorate. The Ministry of Agriculture, Nature Management and Fisheries and the Ministry of Transport, Public Works and Water Management also play a part here.

Table 3.1: Policy instruments and actors in policy-making op in the area of nutrition

instrument	area	organization		description
		ministry	department	
communicative	dissemination of information	Education Agriculture	Primary and Special Education Department (DGPVO) Secondary Education Department (DGPVO) Netherlands Nutrition Centre	disseminating information about healthy food
	product information	Economic Affairs	Market Forces Department (DGES)	labelling food products with information about health effects
	advertizing policy	Education	Media Authority Media, Literature and Libraries Department (DGCA)	restricting the promotion and advertising of unhealthy food
	knowledge policy	Education Agriculture	Research and Science Policy Department (DGW) Department of Agriculture Department of Science and Knowledge Dissemination Department of Trade and Industry	increasing knowledge about the production of healthy food
economic	duties and pricing policy	Finance	Consumer Tax Legislation Directorate (DGFZ) Consumer Tax Directorate (DGB)	imposing/lifting price differentiation on the basis of health, thereby giving consumers an incentive to purchase healthy products
	subsidy policy	Econ. Affairs Agriculture	Market Forces Department (DGES) Department of Veterinary, Food and Environment Matters (VVM) Department of Trade and Industry	providing incentives for the production and sale of healthy food products
legal	sales restrictions	Economic Affairs	Directorate of Spatial Economic Policy (DGES) Market Forces Department (DGES)	adjusting shop opening times, agreements on permitted sales locations for unhealthy food, and age limit
	quality control	Agriculture  Transport	Department of Veterinary, Food and Environment matters Government Meat and Livestock Inspectorate Transport Sectors Directorate (DGG)	rules concerning the production and storage of food.
	Quality of legislation	Econ. Affairs/Justice	Market Regulation, Deregulation and Quality of Legislation Project (MDW operation)	quality of food legislation
	Enforcement	Agriculture	Government Meat and Livestock Inspectorate	supervision of compliance

## 3.2 Alcohol consumption

### *communicative*

In general, the range of communicative policy instruments for influencing the determinant 'alcohol consumption' resemble the instruments that can be used to influence nutrition. In this way, information can be disseminated concerning the consequences or causes of alcohol consumption (this is a job for the Ministry of Health, Welfare and Sport). Product information is also a way of keeping the population informed about the hazards associated with excessive alcohol consumption. Restriction of the promotion of alcohol-containing drinks is also one of the instruments used to bring about changes in behaviour.

### *economic*

The financial incentives used to influence the consumption of alcohol are largely the same as the measures used in the case of nutrition (namely duties and consumer tax). However, the options in terms of a subsidy policy are more limited than in the case of alcohol consumption. Subsidy options can consist of compensatory measures for loss of turnover as a result of measures to limit alcohol consumption. In addition, subsidies can be requested to provide industry with an incentive to develop and produce drinks that either have a low alcohol content or that are alcohol free.

### *legal*

Sales restriction is a legal instrument that is of relevance in influencing alcohol consumption. The Licensing Act contains numerous measures concerning the rules governing the sale of alcohol-containing drinks. In addition to repressive legislation, it is also possible to make agreements with the suppliers of alcohol-containing drinks concerning opening times of hotels, bars and restaurants, age limits and sales locations. Both the Ministry of Health, Welfare and Sport and the Ministry of Economic Affairs could play a part in this. However, opposing interests may be involved here as well. The sale of alcohol-containing drinks generates a considerable income for the state, as well as contributing to employment both in the production sector and in hotels, bars and restaurants. Efforts can be made to achieve a sensible level of alcohol consumption. Another legal instrument is the ban on the use of alcohol-containing drinks in certain situations or locations, such as when driving a vehicle, during work or in football stadiums. Dependent on the situation, a variety of ministries can play a part here. Enforcement and monitoring of compliance can also be considered to be relevant policy instruments. In addition to the Ministry of Home Affairs, the Ministry of Justice is also involved here.

Table 3.2: Policy instruments and actors in policy-making in the area of alcohol

instrument	Area	organization		description
		ministry	department (DG)	
communicative	dissemination of information	Education	Primary and Special Education Department (DGPVO) Secondary Education Department (DGPVO)	disseminating information about the causes and consequences of alcohol consumption
	product information	Economic Affairs	Market Forces Department (DGES)	labelling with information about the effects of excessive alcohol consumption
	advertizing policy	Education	Media Authority Media, Literature and Libraries Department (DGCA)	restricting the promotion and advertising of alcohol
	knowledge policy	Education Economic Affairs	Research and Science Policy Department (DGW)	increasing knowledge about the production of low-alcohol or alcohol-free drinks
economic	duties and pricing policy	Finance	Consumer Tax Legislation Directorate (DGFZ) Consumer Tax Directorate (DGB)	use of duties to increase the price of alcohol-containing drinks
	subsidy policy	Economic Affairs	Market Forces Department (DGES) General Technology Policy Directorate (DGES)	compensation for the consequences of alcohol-limiting measures providing an incentive for the development of alternative products
legal	sales restrictions	Economic Affairs	Directorate of Spatial Economic Policy (DGES) Market Forces Department (DGES)	adjusting shop opening times, agreements on permitted sales locations and age limit
	ban on consumption	Justice	Legislation Department (DGWRR)	the prohibition of alcohol consumption under certain conditions
	enforcement	Foreign Min Justice	Police Department Prevention, Juvenile Crime and Sentencing policy Department (DGPJS)	alcohol checks, monitoring compliance with alcohol legislation (inc. licensing act)

### 3.3 Physical activity

#### *communicative*

The dissemination of information about the beneficial effects of exercise can help to promote physical activity. The dissemination of such information is primarily the responsibility of the Ministry of Health, Welfare and Sport. Information on the benefits of exercise can also be disseminated through the educational system of course. Information about the benefits of physical exercise when travelling to and from work (by bicycle for example) can be initiated by the Ministry of Transport, Public Works and Water Management. The environmental aspects can also be introduced here (Ministry of Housing, Spatial Planning and the Environment). In addition, employers can be informed of measures intended to promote physical activity (thereby producing healthy employees) during working hours (Ministry of Social Affairs and Employment).

#### *economic*

Financial incentives can be used to discourage inactive modes of transport (i.e. by car) and to encourage physically active modes of transport. In this connection, it is possible to focus on travelling to and from work for example. It may be possible to use tax measures to influence journeys to and from work by car. Levies can also be used, for example road pricing, to discourage car use (a task for the Ministry of Transport, Public Works and Water Management). In addition, funds can be used to promote physical activity. Access to facilities offering various types of physical activity can be promoted by economic measures. Financial thresholds can be reduced, by means of subsidies for example. Physically active behaviour can be promoted by providing sports facilities or activity facilities in the local area, at the right time and at the right price, at no risk to individual safety. The primary responsibility for this is borne by the Ministry of Health, Welfare and Sport. Subsidies can also be employed to develop or maintain sports or recreational facilities (which is the area of the Ministry of Housing, Spatial Planning and the Environment and of the Ministry of Agriculture, Nature Management and Fisheries). Subsidies can also be used to promote the use of bicycles. Bicycle paths can be improved and bicycle sheds at strategic points can be expanded (a task for the Ministry of Transport, Public Works and Water Management).

#### *legal*

The legal instruments for influencing physical activity include arrangements concerning physical education within the educational system (Ministry of Education, Culture and Science). Agreements can also be established with employers in the area of working conditions. For example, agreements can be reached with companies that have physically inactive work (desk work) regarding the introduction of fitness sessions at work. It is also possible to make arrangements concerning Physically active modes of transport to and from work. Finally, arrangement can be made in the area of spatial planning. Facilities should be planned such that they are accessible to a majority of the population using physically active modes of transport (walking, cycling).

Table 3.3: Policy instruments and actors in policy-making in the area of physical activity

instrument	area	organization		description
		ministry	department	
communicative	dissemination of information	Education  Transport Social Affairs	Primary and Special Education Department (DGPVO) Secondary Education Department (DGPVO) Mobility market Directorate Working Conditions Department	providing information about the consequences of physical activity/inactivity, physically active modes of transport and employers promoting the physical activity of their employees.
economic	duties and pricing policy	Finance	Consumer Tax Legislation Directorate (DGFZ) Consumer Tax Directorate (DGB)	providing consumers with an incentive to use physically active modes of transport by lifting/imposing duties to create price differentiation
	facilities policy	Agriculture Housing Transport	Department of Rural Areas and Recreation National Spatial Planning Department Mobility market Directorate Innovation Directorate	promoting facilities for active recreation, promoting bicycle traffic
legal	physical education	Education	Primary and Special Education Department (DGPVO) Secondary Education Department (DGPVO)	legislation about the minimal amount of physical education in the educational system
	working conditions	Social Affairs	Working Conditions Department	agreements about company fitness
	spatial planning	Housing	National Spatial Planning Department	guidelines concerning facilities in the immediate area (accessibility for pedestrians or cyclists)

### 3.4 Smoking and environmental smoke

#### *communicative*

The communicative policy instruments for influencing smoking correspond to the options for influencing alcohol consumption. The Ministry of Health, Welfare and Sport has a pioneering role to fulfil here (just as with government measures to curb tobacco use and the Tobacco Act). In addition, there is the option of using the dissemination of information to prevent the adverse effects of environmental smoke. The Ministry of Housing, Spatial Planning and the Environment can provide information on ways in which the quality of the domestic environment, which covers the area of environmental smoke, can be improved.

#### *economic*

The range of economic instruments also corresponds to the range of instruments used to influence alcohol consumption. The use of tobacco can be discouraged by increasing its price, through the use of duties for example. Here also, there is a conflict of economic interests. Subsidies can be employed to combat environmental smoke. In this way, facilities to improve the quality of the domestic environment can be subsidized. Furthermore, subsidies can be employed to compensate for loss of turnover caused by measures to restrict the sale of tobacco.

#### *legal*

The range of legal instruments involves sales restrictions (age limits, sales locations, opening times), no-smoking zones and the enforcement of prohibitions.

It is possible to unilaterally prohibit (from a higher echelon) people from smoking in certain situations (i.e. a repressive measure). However, consultations with all involved can be used to achieve agreement that would allow people to smoke in certain situations. One example might be an arrangement concerning people smoking in television programmes.



Table 3.4: Policy instruments and actors in policy-making in the area of environmental smoke

instrument	area	organization		description
		ministry	department (DG)	
communicative	dissemination of information	Education Housing	Primary and Special Education Department (DGPVO) Secondary Education Department (DGPVO) Directorate-General for Public Housing	disseminating information about the causes and consequences of smoking and environmental smoke. disseminating information about the quality of the domestic environment (inc. environmental smoke)
	product information	Economic Affairs	Market Forces Department (DGES)	labelling with information about the effects of smoking on health
	advertizing policy	Education	Media Authority Media, Literature and Libraries Department (DGCA)	restricting the promotion and advertising of tobacco
economic	duties and pricing policy	Finance	Consumer Tax Legislation Directorate (DGFZ) Consumer Tax Directorate (DGB)	use of duties to increase the price of tobacco
	subsidy policy	Housing	Directorate-General for Public Housing	subsidizing measures to improve the domestic environment
legal	sales restrictions	Economic Affairs	Directorate of Spatial Economic Policy (DGES) Market Forces Department (DGES)	adjusting shop opening times, agreements on permitted sales locations and age limit
	ban on consumption	Justice	Legislation Department (DGWRR)	the prohibition of smoking under certain conditions
	enforcement	Social Affairs Justice	Working Conditions Department Enforcement department (DGR)	monitoring no-smoking in the workplace enforcing no-smoking zones

Establishing no-smoking zones has an effect on environmental smoke. In order to protect employees who do not smoke, arrangements can be made concerning smoking in the workplace. It is important to reach agreements about the way in which no-smoking zones are enforced. Important organizations in this regard are the Ministry of Health, Welfare and Sport and the Ministry of Justice.

### **3.5 Hazardous substances**

#### *communicative*

The dissemination of information is a policy instrument that can be used to reduce exposure to hazardous substances. In those professions in which it is possible that workers will be exposed to hazardous substances, information can be provided about the use of safety or protection equipment for example. In addition to employees, employers can also be informed about creating a safe workplace for employees who work with hazardous substances. The Ministry of Social Affairs and Employment is responsible for the provision of such information. The Ministry of Housing, Spatial Planning and the Environment can contribute to the provision of information about hazardous substances from the point of view of the environment. In particular it can explore the sources of these substances that are damaging to health.

#### *economic*

Working with hazardous substances can be discouraged by the imposition of environmental levies. It is also possible to use subsidy policy to encourage the use of possible alternative production methods, in which no hazardous substances are used. In addition, the stage in the production process at which hazardous substances are used can be influenced by the VAT tariff, which will affect the price of the end product. By these means, employers can be discouraged from using hazardous substances.

Funds for the promotion of certain courses of action can also be used in the area of spatial planning. Industries that use hazardous substances can be induced to locate to safe sites (in terms of residential areas, for example).

#### *legal*

The range of legal instruments consists of establishing rules governing the use of hazardous substances. Rules can involve a total ban on the use of certain substances, or they may permit the use of such substances under carefully defined conditions. Rules governing working conditions are set out in the Working Conditions Act. Such rules must of course be enforced. The Factory Inspectorate (Ministry of Social Affairs and Employment) monitors compliance with regulations.

Table 3.5: Policy instruments and actors in policy-making in the area of hazardous substances

instrument	area	organization		description
		ministry	department (DG)	
communicative	dissemination of information	Social affairs Housing	Working Conditions Department Directorate for Substances, Safety and Radiation	disseminating information about the use of protective equipment and sources of hazardous substances
economic	environmental levy	Finance	Consumer Tax Legislation Directorate (DGFZ) Consumer Tax Directorate (DGB)	use of duties to increase the price of products in which hazardous substances are used
	subsidy policy	Housing Economic Affairs	Directorate for Substances, Safety and Radiation (DGM) General Technology Policy Directorate (DGES)	inducing people to work with non-hazardous substances
legal	legislation	Housing Social affairs	Directorate for Substances, Safety and Radiation (DGM) Working Conditions Department	arrangements about use of hazardous substances, or a total ban
	enforcement	Social affairs Economic Affairs./ Justice	Factory Inspectorate MDW operation	monitoring compliance with legislation

### 3.6 Allergens and air pollution in the indoor environment

#### *communicative*

One possible instrument for reducing exposure to a polluted indoor environment and to allergens is the dissemination of information on how to prevent such exposure. Disseminating information about allergens is largely the domain of the Ministry of Health, Welfare and Sport. Depending on the type of allergen involved, other ministries may also be able to make a contribution. The Ministry of Housing, Spatial Planning and the Environment can contribute to the dissemination of information if the aim is to exert influence to improve the quality of the indoor environment, including beneficial results in terms of dust mite allergy. In the area of communicative instruments, the emphasis could be placed on campaigns for energy efficiency by improving the insulation of homes. Excessive insulation has an adverse effect on the quality of the indoor environment. It might be possible to supplement information on energy efficiency with details on the effect of such measures on the quality of the indoor environment. Allergic reactions caused by pollen, which in relative terms are much more common, can be prevented by providing information about the quantity of pollen in outdoor air, which is season-dependent. The Royal Netherlands Meteorological Institute, which falls under the Ministry of Transport, Public Works and Water Management, is responsible for reporting on such issues.

#### *economic*

Financial incentives can be used to promote housing improvement. This might involve tax measures and various options involving subsidies. Subsidies provided in the context of energy efficiency can also be supplemented with conditions for the maintenance of a high-quality indoor environment. Economic instruments can also be used to provide incentives for developments in the area of energy efficient measures to promote the quality of the indoor environment.

#### *legal*

In the legal area, the state has several policy instruments that can be used to influence the quality of the indoor environment, as well as allergen concentrations. In this way, for example, building regulations can be drawn up that will promote an optimum indoor climate in which exposure to allergens will be reduced. Another option involves making agreements about maximum permissible allergen concentrations. This would mean placing the emphasis on public areas in which many children congregate (day nurseries,

Table 3.6: Policy instruments and actors in policy-making in the area of allergens and the indoor environment

instrument	area	organization		description
		ministry	department (DG)	
communicative	dissemination of information	Housing Economic Affairs.	Directorate-General for Public Housing Energy Efficiency and Sustainable Energy Directorate (DG for energy)	disseminating information about the quality of the indoor environment in houses and ways to influence this
	pollen reports	Transport	The Royal Netherlands Meteorological Institute	warnings for allergy patients
economic	tax	Finance	Consumer Tax Legislation Directorate (DGFZ) Consumer Tax Directorate (DGB)	use of tax measures to improve housing or making it cheaper to improve the indoor environment
	subsidy policy	Housing	Directorate-General for Public Housing	incentives for the promotion of a high-quality indoor environment
legal	building regulations	Housing	Directorate-General for Public Housing	regulations in the area of house-construction (e.g. ventilation)
	standards	Housing  Education  Social Affairs	Directorate-General for Public Housing Air and Energy Directorate (DGM) Primary and Special Education Department (DGPVO) Working Conditions Department	imposing standards for permissible allergen concentrations in houses, air, at school and in the workplace
	enforcement	Social Affairs	Factory Inspectorate	Monitoring compliance with regulations

playgroups, schools) and in the working environment. In addition to imposing standards, there must also be monitoring to ensure compliance with the standards.

### **3.7 Air pollution**

#### *communicative*

Air pollution can be reduced by reducing the emission of air pollutants by industry, agriculture and traffic. The dissemination of information can play an important part in this, with the Ministry of Housing, Spatial Planning and the Environment taking a leading role. Information can also be employed to limit or avoid health damage caused by air pollution. One example of this would be the provision of topical information about smog concentration, as well as information about protective measures in situations of excessive air pollution. Information about smog levels is provided by the National Institute of Public Health and the Environment (Ministry of Health, Welfare and Sport/Ministry of Housing, Spatial Planning and the Environment). In this context there can be collaboration with the Royal Netherlands Meteorological Institute. Finally, communicative instruments can be used to discourage activities that pollute the air, such as driving, and to encourage alternatives (see Physical Activity, section 3.4).

#### *economic*

Various economic instruments can be used to reduce air pollution. Activities that pollute the air can be discouraged and financial incentives can be used to promote environmentally friendly alternatives. A number of different ministries can be involved in the use of such instruments, partly depending on the source of the air pollution. Where car traffic is involved, the Ministry of Transport, Public Works and Water Management will bear initial responsibility. Industry falls under the policy area of the Ministry of Economic Affairs, while agriculture is part of the Ministry of Agriculture, Nature Management and Fisheries. Wherever financial incentives are given, in the form of tax measures, one of the major organizations involved will be the Ministry of Finance.

#### *legal*

Various ministries can be involved in the case of legal instruments also, depending on the source of the air pollution. A central organization in the area of laws and regulations is the Ministry of Housing, Spatial Planning and the Environment, which attempts to prevent adverse effects on the environment in a range of areas. Standards can be drawn

Table 3.7: Policy instruments and actors in policy-making in the area of air pollution

instrument	area	organization		description
		ministry	department (DG)	
communicative	dissemination of information	Housing	Air and Energy Directorate (DGM) Directorate for Drinking Water, Water and Agriculture (DGM) Directorate for Noise Abatement and Traffic (DGM)	disseminating information about the reduction of emissions and protective measures
	reports	Transport	The Royal Netherlands Meteorological Institute	warnings of periods of air pollution
economic	tax	Finance	Consumer Tax Legislation Directorate (DGFZ) Consumer Tax Directorate (DGB)	use of tax measures to make activities that pollute the air more expensive
	subsidies/levies	Transport  Economic Affairs Agriculture	Mobility market Directorate (DGP) Innovation Directorate (DGP) Manufacturing and Heavy Industry Directorate (DGID)  Department of Agriculture	encouraging measures to reduce air pollution and levies on activities that pollute the air
legal	standards	Housing Transport	Air and Energy Directorate (DGM) Mobility market Directorate (DGP) Innovation Directorate (DGP)	regulations regarding permissible concentrations and emissions
		Economic Affairs Agriculture	Manufacturing and Heavy Industry Directorate (DGID)  Department of Agriculture	
	spatial planning	Housing	National Spatial Planning Department	Guidelines for the layout of the living environment in relation to air pollution
	monitoring	Housing	Environmental Inspectorate (DGM)	Monitoring compliance with the regulations

up and monitoring of compliance with such standards is one way of safeguarding air quality. Regulations and standards can also be imposed with regard to the layout of the living environment, for example, regarding the sites for polluting industries relative to residential areas (spatial planning).

### **3.8 Mental stress**

#### *communicative*

Mental stress is the result of putting individuals under pressure, it is also a function of their ability to handle pressure. The ability to handle pressure can be increased through the dissemination of information and/or by giving courses in how to deal with stress. Disseminating information about stressors can also have a beneficial effect on levels of mental stress. The promotion of social skills can also be seen as a communicative instrument with the potential to favourably influence stress.

#### *economic*

Economic instruments can be used to enhance facilities for relaxation. These instruments can also be employed to lower thresholds related to the use of facilities. In addition to sport and recreational facilities, this also relates to social and welfare facilities in the broadest sense of the term. These vary from choral societies to day-care centres. The most relevant ministries in this connection are the Ministry of Social Affairs and Employment and Ministry of Health, Welfare and Sport.

Subsidies can also be employed to provide facilities for traumatized individuals (Ministry of Health, Welfare and Sport). In addition, subsidies can be employed to promote the early detection of symptoms of mental stress in the educational system and in the workplace. Finally, economic instruments can be used to influence potential stressors. In this way, measures can be put in place to improve working conditions, the labour market or an individual's income situation.

#### *legal*

Legal instruments can be used in many areas to reduce stressful factors. Rules and agreements, for example, can be drawn up in connection with stress caused by working conditions, the living environment, housing conditions or housing. In each of these areas, various factors such as pressure of work, safety or noise nuisance can contribute to an excessively stressful situation, resulting in mental stress.

The range of available legal instruments also includes the monitoring and enforcement of rules.



Table 3.8: Policy instruments and actors in policy-making in the area of mental stress

instrument	area	organization		description
		ministry	department (DG)	
communicative	education	Education Social Affairs	Primary and Special Education Department (DGPVO) Secondary Education Department (DGPVO) Working Conditions Department	training and/or courses about dealing with stress and social pressure
economic	incentive policy	Housing Agriculture Education	National Spatial Planning Department Department of Rural Areas and Recreation Cultural Heritage Directorate (DGCA) Media, Literature and Libraries Department (DGCA) Cultural Policy Department	providing incentives for facilities where people can relax (recreational and relaxation facilities)
	labour and unemployment	Social Affairs	General Socio-economic Affairs Department Labour Market Directorate National Assistance Directorate Directorate of Social Security	reduction of stress related to work or unemployment (pressure of work, terms and conditions of employment, employment, social security)
legal	regulation	Social Affairs Housing	Working Conditions Department Directorate for Noise Abatement and Traffic (DGM) National Spatial Planning Department	regulations aimed at reducing stressors on the area of work, traffic and noise nuisance, as well as spatial planning)
	enforcement	Justice	Enforcement department (DGR)	enforcement of rules for reducing stressors

### 3.9 Road safety and behaviour in traffic

#### *communicative*

Road safety can be promoted by disseminating information about safe driving and about the use of safety measures seat belts, headrests and helmets. This is primarily the domain of the Ministry of Transport, Public Works and Water Management. However, the educational system is also used to convey information on this topic, in road safety lessons for example. Measures to influence the content of driving lessons (both practical and theoretical) are just some of the communicative instruments for influencing road safety.

In addition to the dissemination of information, the announcement of police checks is one of the communicative instruments that can be used to influence the driving behaviour of road users.

#### *economic*

A targeted pricing policy (using duties and subsidies) can act as an incentive for the use of measures to promote road safety. Cars that fail to meet the stipulated safety requirements would be subject to increased taxes, in the form of road tax. Financial inducements can also be used to discourage dangerous driving. This would allow traffic offences to be punished by forcing the offenders to pay extra road tax, for example.

Additional resources can also be used to promote safety on the public highway. Options would include suitably laid-out junctions, street lighting, bicycle paths, the quality of the road surface and general improvement to the infrastructure.

Road safety can also be enhanced by reducing levels of motorized traffic. There are many conceivable economic measures that would make driving more expensive and alternatives cheaper, or more attractive (see section 3.3). In addition to measures that target mobility (primarily the domain of Ministry of Transport, Public Works and Water Management) one could also consider various incentives to promote working at home, for example.

#### *legal*

Various rules can be drawn up in the area of road safety. The purpose of traffic regulations is to enhance road safety. Furthermore, agreements about minimum safety requirements for vehicles can be supplemented or enhanced, they can include agreements about the safety aspects of vehicles with bicycle manufacturers or the motor trade, for example. The monitoring and enforcement traffic regulations is an important element in the area of road safety (MOT tests, police checks).

Table 3.9: Policy instruments and actors in policy-making in the area of road safety and behaviour

instrument	area	organization		description
		ministry	department (DG)	
communicative	dissemination of information	Transport	Traffic Safety and Vehicle Directorate (DGP) Transport Safety Directorate Consultative Committee on Traffic Safety	disseminating information on road safety
	product information	Education	Primary and Special Education Department (DGPVO) Secondary Education Department (DGPVO)	road safety lessons
	police checks	Transport Home Affairs	Transport Research Centre (RW) Police Department	Information about police checks, to promote road safety
economic	duty and pricing policy	Finance	Consumer Tax Legislation Directorate (DGFZ) Consumer Tax Directorate (DGB)	by adding/raising duties, thereby influencing price which is an incentive for behaviour in line with enhanced road safety and for road safety measures
	public highway and spatial planning	Transport Economic Affairs Housing	Traffic Safety and Vehicle Directorate (DGP) Directorate of Spatial Economic Policy (DGES)  Directorate for the Implementation and Coordination of Spatial Policy (DGRO)	incentive for road safety measures regarding the layout of the public highway and spatial planning
	working at home	Social Affairs Transport	Mobility market Directorate	incentive for working at home, thereby reducing traffic levels and increasing road safety
legal	legislation	Transport	Traffic Safety and Vehicle Directorate (DGP)	monitoring and, if necessary, adjusting traffic regulations
	enforcement	BZK Justice	Police Department (DGOOV) Enforcement department (DGR)	monitoring compliance with traffic regulations

### 3.10 Medication, alcohol<sup>2</sup> and drug use when driving

#### *communicative*

Communicative instruments can be employed to prevent or limit the use of medication and drugs when driving. One important instrument is the dissemination of information about the consequences of using medication and drugs when driving. In addition to the Ministry of Health, Welfare and Sport, the Ministry of Transport, Public Works and Water Management can also play a part here. The range of communicative instruments also includes information, either on the products in question, or enclosed with them, about the consequences of using them when driving. Providing product information about the consequences of using illegally obtained drugs is less easily achieved. However, information can be provided at specific locations (such as ‘raves’) concerning the consequences of taking drugs prior to driving.

#### *economic*

One economic instrument that can be used against driving while under the influence of medications, alcohol and/or drugs is to provide incentives or subsidies for alternative forms of transport. These can be used specifically at places where drug use is common, such as discos and ‘raves’.

#### *legal*

The legislation governing drug use when driving can be enhanced or supplemented. An essential feature of any such change is that it should also be possible to check whether drivers have taken drugs. Police alcohol checks are commonly used at the moment. Checks on the use of medications or drugs can also be included. Besides repressive instruments, it is also possible to reach agreements with roadside suppliers of alcoholic drinks, such as petrol stations and motorway restaurants.

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<sup>2</sup> In addition to measures aimed at reducing alcohol consumption (see section 3.2) other measures are conceivable that specifically target the consumption of alcohol by drivers. These measures are broadly comparable with those on the area of medication and drug use when driving.

*Table 3.10: Policy instruments and actors in policy-making in the area of medicine, alcohol and drug use when driving*

instrument	area	organization		description
		ministry	department (DG)	
communicative	dissemination of information	Transport Justice	Traffic Safety and Vehicle Directorate (DGP) Prevention, Juvenile Crime and Sentencing Policy Department (DGPJS)	disseminating information on the use of drugs when driving
	product information	Economic Affairs	Market Forces Department (DGES)	labelling with warnings about the consequences for drivers
economic	financial incentives	Transport Justice	Innovation Directorate (DGP) Prevention, Juvenile Crime and Sentencing Policy Department (DGPJS)	encourage the use alternative forms of transport when drugs are being taken (e.g. disco buses)
legal	legislation	Transport	Traffic Safety and Vehicle Directorate (DGP)	banning the use of drugs when driving
	enforcement	Home Affairs Justice	Police Department (DGOOV) Enforcement department (DGR)	monitoring and checks for drug use when driving

### 3.11 Life events

‘Life events’ is an umbrella term for a wide range of phenomena. Some examples of life events that can influence the development of depression are becoming unemployed, the death of a loved one, being a victim of a violent crime, and divorce. There is a broad range of opportunities for influencing the causes and consequences of these events. In elaborating this determinant, we felt that it would be best to limit ourselves with the greatest potential for being susceptible to influence. We have opted to omit the death of one’s nearest and dearest and divorce.

Unemployment and violent crimes will be elaborated further here, as examples of life events that are susceptible to influence.

#### **a. unemployment**

##### *communicative*

Communicative instruments for the prevention of adverse effects of unemployment can focus on information for the prevention of unemployment and purely on the effects of unemployment. It is possible to combat unemployment by providing adequate information about the labour market and about job vacancies. Conveying information in the form of retraining or refresher courses can help someone enter or re-enter the labour market. Disseminating information can also be used to inform people about alternatives to paid work (such as voluntary work), which can also serve to influence the consequences of unemployment.

##### *economic*

Financial incentives can be used to get people back to work. Finding paid work is generally coupled with an improvement in an individual’s financial position. Financial incentives can also be taken to mean reductions in unemployment benefit for those who refuse suitable work. Increasing unemployment benefits whenever suitable work is not available may be able to assuage the adverse effects of unemployment. Economic instruments can also be employed to make labour cheaper, which makes it a more attractive proposition for employers to take people on (such as initiatives to allow the long-term unemployed to re-enter the labour market, and employees with short-term contracts or workers supplied by temp agencies). Finally, the general economic situation also influences employment.

Table 3.11: Policy instruments and actors in policy-making in the area of unemployment

instrument	area	organization		description
		ministry	department (DG)	
communicative	dissemination of information	Social Affairs	Labour Market Directorate	dissemination of information about labour market, job vacancies
	training	Education	Vocational and Adult Education Department (DGB) Higher Professional Education Department (DGB) Primary and Special Education Department (DGPVO) Secondary Education Department (DGPVO)	training to improve chances of entering labour market
economic	unemployment benefits	Social Affairs	National Assistance Directorate Directorate of Social Security	cutting or raising unemployment benefits to stimulate individuals to take up work
	general	Social Affairs	General and Socio-economic Affairs Department	promoting economy and employment
	subsidy	Social Affairs	Labour Market Directorate	subsidizing jobs
legal	legislation	Social Affairs	Working Conditions Department Labour Market Directorate	legislation to protect employees
	enforcement	Social Affairs	Working Conditions Department Labour Market Directorate Factory Inspectorate	enforcement of rules to protect employees

*legal*

Laws and regulations can be used to protect jobs and to prevent people from being made redundant. Arrangements can also be made with employers concerning the maintenance of employment, and redundancy schemes.

**b. violent offences***communicative*

Communicative instruments can be used to reduce violent offences and to minimize the consequences of violent offences. The dissemination of information can be used to influence potential perpetrators of violent crimes, via the schools for example. Moreover, the focus can also be placed on factors that cause or promote violence, such as alcohol consumption (see section 3.2).

Information can also be disseminated to the potential victims of violent crimes. Providing such information is the responsibility of the judicial authorities and the police. Information can also be employed in the follow-up care of victims of violent crime.

In a more general sense, information for the prevention of violent crimes can be transferred through the educational system. Repressive communicative instruments can also be postulated, for example, curbing displays of violence in the public media.

*economic*

Subsidizing or stimulating measures to promote safety are just two of the options in the range of economic instruments. In addition to measures focusing on the layout of the living environment (lighting, for example) safety measures for shops and/or companies are stimulated by subsidy measures or tax measures.

Economic measures directed at the background to violent crimes, such as alcohol consumption or the perspectives for certain groups. Furthermore, one could consider the use of funds to stimulate activities in the area of social and welfare policy (partly the Ministry of Health, Welfare and Sport). Resources can be allocated for such purposes from the Major Cities Policy or the Minorities Policy and used in the same sort of context.

*legal*

Legal instruments can also be employed to prevent crimes of violence. For example, legislation pertaining to the carrying of stabbing weapons could be made more stringent. Agreement could also be reached with restaurants, bars and hotels with regard to closing times and/or stabbing weapons. Of course, monitoring and enforcement of legislation pertaining to crimes of violence is also important.



Table 3.12: Policy instruments and actors in policy-making in the area of violent crimes

instrument	area	organization		description
		ministry	department (DG)	
communicative	dissemination of information	Education Home Affairs Justice	Primary and Special Education Department (DGPVO) Secondary Education Department (DGPVO) Police Department (DGOOV) Prevention, Juvenile Crime and Sentencing Policy Department (DGJS)	dissemination of information to perpetrators and victims
	media policy	Education	Media Authority Media, Literature and Libraries Department (DGCA)	limiting the amount of violence presented by the media limited advertizing about alcohol
Economic	duty and pricing policy	Finance	Consumer Tax Legislation Directorate (DGFZ) Consumer Tax Directorate (DGB) Direct Tax Legislation Directorate (DGFZ)	lifting/imposing duties to bring down the price of safety measures
	subsidy policy	Economic Affairs Housing	Market Forces Department (DGES) Directorate General for Spatial Planning	subsidizing safety measures and the safe layout of public places
	target group policy	Home Affairs	Minorities Integration Coordination Department Major City Policy Project	subsidizing target group projects, in order to prevent violence
legal	legislation	Justice	Legislation Department (DGWRR)	strengthening legislation (with regard to the possession of weapons for example) pertaining to crimes of violence
	enforcement	Home Affairs Justice	Police Department (DGOOV) Prevention, Juvenile Crime and Sentencing policy Department (DGPJS)	enforcing legislation pertaining to crimes of violence

## 3.12 Family problems and other problems

The heading of family problems and other problems covers personal problems, day to day problems, problems with relationships, family problems and child abuse. It includes a wide range of problems, in which the opportunities for exerting influence occur primarily in the area of welfare (Ministry of Health, Welfare and Sport). In addition, it would of course be appropriate to implement a general social policy, to prevent problems. The scope of the problems involved and the range of policy instruments for dealing with them are too many and varied to cover completely here. In section 3.2 and section 3.11, the focus is on several major underlying determinants of family problems, namely life events and excessive alcohol consumption. For a summary of policy instruments and organizations in the field of family problems and other problems, the details shown in tables 3.2, 3.11a and 3.11b are to some extent relevant.

## 3.13 Social support

### *communicative*

The dissemination of information can be used in an attempt to stimulate social support. Communicative instruments can also be employed to enhance solidarity. In addition, communication alone is an element of social support. Increasing the options for communication and lowering the thresholds in this area can also increase the degree of social support. For example, dissemination of information or training can be offered with regard to communication options.

### *economic*

Economic instruments can be particularly useful in encouraging the development of social contacts, which is accompanied by social support. As already stated above, opportunities for communication can be encouraged, such as use of the internet by the elderly. Subsidies can be used for courses in this area, for example. Economic measures can be used to enhance the quality of life in an individual's immediate environment, which offers opportunities for social contacts and social participation. If a social life and welfare work are encouraged, this will contribute to social support (Ministry of Health, Welfare and Sport). This should also be taken into account by those responsible for the layout of new residential areas.

Finally, financial measures can also be very important for social participation, certainly for lower income groups (those on social security and benefits).

Table 3.13: Policy instruments and actors in policy-making in the area of social support

instrument	area	organization		description
		ministry	department (DG)	
communicative	dissemination of information	Social Affairs Education	Primary and Special Education Department (DGPVO) Secondary Education Department (DGPVO)	dissemination of information on the importance of social support
	education/courses	Education	Primary and Special Education Department (DGPVO) Secondary Education Department (DGPVO) Media, Literature and Libraries Department (DGCA)	training and courses on opportunities for communication
economic	subsidy policy	Education	Media, Literature and Libraries Department (DGCA)	subsidizing opportunities for communication
	layout of living environment	Housing	Directorate-General for Public Housing National Spatial Planning Department	encouraging the layout of a living environment in which social contacts are possible
	income policy	Social Affairs	National Assistance Directorate Directorate of Social Security	income level at which social participation remains possible
legal	general	Social Affairs	General Socio-economic Affairs Department Major cities policy project	general arrangements in the context of social policy and welfare policy, which maintain or promote solidarity and social support

*legal*

The legal instruments that can be used to promote social support are chiefly general in nature. In many forms of laws and regulations, it is possible to take into account the maintenance or the promotion of solidarity and/or social participation. Within the social and welfare policy, as well as in the Major Cities Policy, consideration can be given to social support. Legal instruments can be used to create limiting conditions.

### **3.14 Layout of the living environment**

*communicative*

Information can be disseminated concerning a safe layout for the living environment, one that will prevent domestic accidents. For example, information can be disseminated concerning hazardous situations in specific living conditions. In addition, specific information can be provided concerning fire hazards, for example. Communicative instruments can also be used for hazardous situations in the living environment (district or neighbourhood). One example would be a hotline (combined with information about how to use it). Accident prevention is primarily the responsibility of the Ministry of Health, Welfare and Sport. However, it is possible that Ministry of Housing, Spatial Planning and the Environment may also have a part to play here.

*economic*

Duties and taxes can be used to beneficially influence the price of products that enhance the safety of the living environment.

Other economic instruments that are used to promote a safe layout of the living environment include subsidies and development funds. This applies both to measures taken indoors and in the living environment. The focus in the living environment, for example, can be on pavements, high kerbs, poles, bodies of water and playgrounds. In addition to the layout, maintenance and quality of the road surface (pavements) is important. Both the Ministry of Housing, Spatial Planning and the Environment and the Ministry of Transport, Public Works and Water Management have a part to play here.

*legal*

A considerable amount of legislation is possible in the area of the layout of the living environment. Accordingly, the Building Regulations include various guidelines

Table 3.14: Policy instruments and actors in policy-making in the area of living environment layout

instrument	area	organization		description
		ministry	department (DG)	
communicative	dissemination of information	Housing Education	Directorate-General for Public Housing Primary and Special Education Department (DGPVO) Secondary Education Department (DGPVO)	dissemination of information about living safely and about a safe living environment
	hotline	Housing	Directorate General for Spatial Planning	hotline for hazardous situations
economic	duty and pricing policy	Finance	Consumer Tax Legislation Directorate (DGFZ) Consumer Tax Directorate (DGB) Direct Tax Legislation Directorate (DGFZ)	lifting/imposing duties to bring down the price of safety measures
	layout of living environment	Housing	Directorate-General for Public Housing National Spatial Planning Department Road and Hydraulic Engineering Division (RW)	encouraging a safe layout for the living environment
legal	legislation	Housing	Directorate-General for Public Housing National Spatial Planning Department	building regulations and regulations for the layout of the living environment
	enforcement	Housing	Regional Inspectorates Market Services Directorate (DGVH)	enforcement of regulations

concerning the construction of safe dwellings (layout of the stairs, positioning of windows, positioning of lighting etc.). Regulations can also be drawn up or agreements can be made concerning the layout of the living environment (such as playground fittings, depth of ponds in residential districts etc.).

### **3.15 Quality of consumer goods**

#### *communicative*

Information can be disseminated concerning aspects of the quality of consumer goods. Such information can influence consumers to purchase safe products. In addition, adequate product information is important for the safety of consumer goods.

#### *economic*

By making use of duties and taxes, it is possible to increase the price of unsafe products and to decrease the price of safe products. Subsidies can also be used, for example, to encourage the production of safe products.

#### *legal*

Guidelines can be drawn up concerning the quality of consumer goods. These can be extended by the use of a certification system involving prohibition of the sale of non-certified products. Monitoring and enforcement are also important instruments for safeguarding the quality of consumer articles.

Table 3.15: Policy instruments and actors in policy-making in the area of quality of consumer goods

instrument	area	organization		description
		ministry	department (DG)	
communicative	dissemination of information			dissemination of information about safe products
	product information	Economic Affairs	Market Forces Department (DGES)	information about the safe use of goods
	advertising policy	Education	Media Authority Media, Literature and Libraries Department (DGCA)	restriction of promotion and advertising for unsafe products
economic	duty and pricing policy	Finance	Consumer Tax Legislation Directorate (DGFZ) Consumer Tax Directorate (DGB) Direct Tax Legislation Directorate (DGFZ)	lifting/imposing duties to conduct a pricing policy based on product safety
	subsidy policy	Economic Affairs	Market Forces Department (DGES) General Technology Policy Directorate (DGES)	promoting the production of safe articles
legal	legislation	Economic Affairs	Market Forces Department (DGES)	legislation in the area of safety requirements
	certification	Economic Affairs	European Integration Department (DGBEB)	certification on the basis of safety (European Directives)
	enforcement			monitoring product safety

## 3.16 Dog bites

### *communicative*

Information can be disseminated to prevent people from being bitten by dogs. This can be distributed both to dog owners and to potential victims. Training and obedience classes for dogs can also be provided.

### *economic*

Financial measures can be employed to discourage people from owning dogs. The dog-licence fee could be increased, for example. It is also possible to use duties and tax measures to increase the price of dogs and that of products for dogs.

### *legal*

Laws and regulations can also be used to reduce the incidence of dog bites. For example, certain breeds of dog could be prohibited or leash-regulations could be introduced in certain areas. Furthermore, rules regarding dog breeding could also be introduced. Monitoring and enforcement naturally form part of the range of policy instruments.



Table 3.16: Policy instruments and actors in policy-making in the area of dog bites

Instrument	area	organization		description
		ministry	department (DG)	
communicative	dissemination of information	Agriculture	Department of veterinary, food and environment matters Council for Animal Affairs	dissemination of information to dog owners
	courses	Agriculture	Department of veterinary, food and environment matters Council for Animal Affairs	dog courses (training, obedience)
economic	duty and pricing policy	Finance	Consumer Tax Legislation Directorate (DGFZ) Consumer Tax Directorate (DGB) Direct Tax Legislation Directorate (DGFZ)	lifting/imposing duties to conduct a pricing policy for dog ownership
legal	legislation	Agriculture	Department of veterinary, food and environment matters Council for Animal Affairs	prohibition of certain breeds of dog/ leash regulations guidelines for dog breeders
	enforcement	Home Affairs Justice	Police Department (DGOOV) Enforcement department (DGR)	enforcement of legislation

### 3.17 Discussion

In the preceding sections, reference has been made to a large number of actors in policy-making that may have an influence on determinants of the nine selected diseases that were used as the starting point for this exercise.

The results are summarized in table 3.17. In contrast to the above, however, the ministry is used as the starting point. The relevant directorates or departments are indicated per ministry, after which the determinants and the diseases that can be influenced are depicted.

The purpose of the exercise was to trace the most important organizations in the intersectoral policy review. The figures presented in this report show that the various ministries contain a range of departments that are capable of contributing to the intersectoral policy review. Some ministries are mainly concerned with a specific determinant, for example the Ministry of Agriculture, Nature Management and Fisheries, whose influence is primarily related to nutrition. There are other departments that are able to play a part in an enormous number of determinants. For example, education has a major role in the dissemination of information. The Ministry of Finance is also involved in a very large number of determinants. This is a consequence of the fact that this ministry possesses a range of instruments for implementing a pricing policy. The same applies to the departments whose primary importance has to do with monitoring and enforcement of regulations, namely the ministries of Justice and Home Affairs.

The numerous policy sectors that may be able to contribute to the intersectoral policy review should be further prioritized. In this context, one of the illnesses will be further elaborated in the next section.

Table 3.17 Policy sectors per ministry, and their spheres of influence

ministry	directorate/department	determinants													illnesses									
		nutrition	alcohol	physical activity	smoking	hazardous substances	allergens, indoor envt.	air pollution	stress	road safety	substance use	life events	social support	living environment	consumer goods	dog bites	intestinal cancer	lung cancer	CNSLD	Coronary artery disease	stroke	traffic accidents	domestic accidents	depression
Home Affairs	Police Department								X	X	X				X						X	X	X	
	Major Cities Policy Project										X	X												X
	Minorities Integration Coordination Department										X	X												X
Economic Affairs	Market Forces Department	X	X	X							X				X		X	X	X	X	X	X	X	X
	Directorate of Spatial Economic Policy		X	X					X								X	X	X	X	X	X	X	X
	MDW operation	X				X											X	X		X	X			
	General technology Policy Directorate	X	X			X									X		X	X		X	X	X	X	X
	Energy Efficiency and Sustainable Energy Directorate						X											X						
	General Economic Politics Directorate											X												X
	Manufacturing and Heavy Industry Directorate							X										X						
	European Integration Department														X								X	
Finance	Consumer Tax Legislation Directorate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Consumer Tax Directorate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Direct Tax Legislation Directorate			X											X									
Justice	MDW operation	X				X										X	X		X	X				
	Legislation Department		X	X							X				X	X	X	X	X	X	X	X	X	X
	Prevention, Juvenile Crime and Sentencing policy Department		X							X	X					X			X	X	X	X	X	X
	Enforcement department		X	X					X	X	X				X	X	X	X	X	X	X	X	X	X
Agriculture	Netherlands Nutrition Centre	X														X	X		X	X				
	Department of Agriculture	X					X									X	X	X	X	X				
	Department of Science and Knowledge Dissemination	X														X	X		X	X				
	Department of Trade and Industry	X														X	X		X	X				
	Department of veterinary, food and environment matters	X														X	X		X	X				

	Government Meat and Livestock Inspectorate	X													X	X		X	X				
	Council for Animal Affairs														X							X	
	Department of Rural Areas and Recreation			X				X										X	X				
Education	Primary and Special Education Department	X	X	X	X		X	X	X	X	X				X	X	X	X	X	X	X	X	X
	Secondary Education Department	X	X	X	X		X	X	X	X	X				X	X	X	X	X	X	X	X	X
	Vocational and Adult Education Department									X													X
	Higher Professional Education Department									X													X
	Media Authority	X	X		X					X				X	X	X	X	X	X	X	X	X	X
	Media, Literature and Libraries Department	X	X		X			X		X	X			X	X	X	X	X	X	X	X	X	X
	Research and Science Policy Department	X													X	X		X	X				
	Cultural Heritage Directorate							X										X	X				
	Cultural Policy Department							X										X	X				
Social Affairs	Working Conditions Department			X	X	X	X	X								X	X	X	X				
	Factory Inspectorate				X	X										X	X						
	General Socio-economic Affairs Department							x			x							x	x				x
	National Assistance Directorate							X										X	X				
	Directorate of Social Security							X										X	X				
	Labour Market Directorate										X												X
Transport	Transport Sectors Directorate	X													X	X		X	X				
	Mobility Directorate			X														X	X				
	Innovation Directorate			X			X			X								X	X	X			
	Royal Netherlands Meteorological Institute					X	X											X					
	Mobility market Directorate					X		X										X				X	
	Traffic Safety and Vehicle Directorate							X	X													X	
	Transport Safety Directorate							X														X	
	Consultative Committee on Traffic Safety							X														X	
	Transport Research Centre							X														X	
	Road and Hydraulic Engineering Division												X										X
Housing	National Spatial Planning Department			X			X	X		X	X	X					X	X	X		X	X	
	Directorate-General for Public Housing			X		X	X			X	X					X	X	X	X		X	X	
	Directorate for Substances, Safety and Radiation				X										X								
	Air and Energy Directorate				X	X											X						
	Directorate for Drinking Water, Water and Agriculture					X											X						





## 4. Further elaboration of the determinants of one of the clinical pictures: CNSLD

### 4.1 Introduction

One of the nine clinical pictures will be further elaborated in this section. The criteria for selecting a given disease is that there should be an adequate understanding of the underlying determinants of the clinical picture. Furthermore, these determinants should cover a variety of fields, for example alongside determinants in the area of lifestyle there should also be determinants in the area of the physical environment.

Given the selection of these criteria, the psychological disorders of depression and alcohol dependence are not eligible for further elaboration. This is because the determinants for these disorders are still too poorly understood. Nor are accidents eligible for further elaboration, since the category is too diverse and, dependent on the type of accident involved, the determinants are overly concentrated in one specific area. For example, the determinants for domestic accidents that occur as a result of daily activities are entirely different to those that are important for domestic accidents involving falls in the street where no other party is involved.

Much still remains to be discovered about the determinants of intestinal cancer and rectal cancer. Nutrition is assumed to play an important part here, even though it is not entirely clear which elements of the diet have the greatest effect. As regards lung cancer, smoking is by far the most important determinant. The influence of other determinants is subordinate to this and far less evident. In view of the above, neither of these cancer types are eligible for further elaboration. The determinant profiles of coronary artery disease and stroke show a considerable degree of correspondence. The determinants of these disorders are largely related to lifestyle. If these disorders were to be selected, further elaboration would be too limited.

The disorder that was finally chosen was CNSLD, mainly because the determinants are spread across a range of areas. As mentioned in section 2, the development of CNSLD involves both endogenous and exogenous factors. The most important exogenous determinant for the development of CNSLD is *smoking*, which is associated with the area of lifestyle. For CNSLD, the influence of the physical environment can be subdivided into three areas, namely the outdoors environment, the indoor environment (in houses) and the workplace. These three imply that various departments could be involved in attempts to influence this disorder, which is an additional advantage (in terms of further elaboration) relative to the other clinical pictures. Air pollution plays an important part in the area of the physical environment.

## 4.2 CNSLD

CNSLD (Chronic Non Specific Lung Disease) is an umbrella term for various diseases of the airways such as asthma, chronic bronchitis and emphysema (VTV, 1997). These disorders are ranked in ICD-9 under Chronic Obstructive Pulmonary Diseases and associated disorders (ICD-9: 490-496). Given the marked overlap in symptoms, the English umbrella term Chronic Non Specific Lung Disease (CNSLD) is often used. Since 1991, a distinction has often been made between asthma and COPD (chronic obstructive pulmonary disease), including chronic bronchitis and emphysema (Van Schayk, 1994). Future research into the aetiology of both disorders may eventually lead to a more precise delineation.

For the moment, in VTV-97, this distinction has not been made and the determinants for these disorders have been combined as the determinants of CNSLD.

CNSLD affects people of all ages. In general, asthma is seen more often in children and in young adults, while chronic bronchitis and emphysema occur more often in the elderly. The course of CNSLD is characterized by sudden exacerbations and by the return of symptoms. Exogenous factors can also have an influence on the course of CNSLD. These are largely the same factors that are involved in the development of CNSLD.

Much remains to be discovered about the course of asthma in children. Over time, the symptoms disappear in a considerable proportion of these children. However, later in life, many asthma patients acquire the symptoms of chronic bronchitis or emphysema. Chronic bronchitis can, over time, turn into emphysema.

## 4.3 Determinants of CNSLD

As was explained in section 2.3.3, both endogenous and exogenous factors are involved in the development of CNSLD. These determinants can also play a part in the course of CNSLD. The most important exogenous determinant for the development of CNSLD is smoking. In addition, air pollution plays an important part. Three types can be distinguished:

- outdoor air pollution:
  - OZONE (in the summer)
  - SO<sub>2</sub>, NO<sub>2</sub> and acidic aerosols in the winter.
- air pollution and other pollution in the indoor environment:
  - tobacco smoke in the environment
  - NO<sub>2</sub> (from sources such as gas-fired water heaters without external vents)
  - dust
  - moisture
  - moulds



- dust mites
- air pollution in the workplace:
  - dust
  - gases and vapours.

Section 3 contains a description of the actors in policy-making who might be involved in influencing these determinants.

#### **4.4 Prioritization of determinants on the basis of the burden of proof**

The burden of evidence can be used as an argument for a prioritization of determinants. A report by Maas (1994) contains a summary of current knowledge concerning the determinants and prevention of CNSLD, this report includes an examination of the burden of proof. Besides its influence on the development of CNSLD, the author also examines the course of the disease. Tables 4.1 and 4.2 summarize current knowledge concerning the exogenous determinants of asthma and COPD. The exogenous determinants shown are described in greater detail than in the last section, since that was a wide-ranging stock-taking. Convincing evidence regarding the aetiology of asthma is found in conjunction with air pollution at the workplace, passive smoking and allergens. In the case of COPD, the aetiological burden of proof is convincing for air pollution in the workplace and for smoking. Of the determinants that are susceptible to influence via intersectoral policy, it was found that there was a convincing burden of proof associated with air pollution and the course of the disease. The burden of proof concerning the influence of viruses (such as influenza) on the course of the disease is quite convincing. However, the prevention of viruses (by vaccination) is largely a matter for the Ministry of Health, Welfare and Sport. Furthermore, it is not of great importance within the context of this exercise.

Table 4.1 Summary of the exogenous determinants of asthma (source: Maas, 1994)

	influence on aetiology/course	burden of proof <sup>(1)</sup>	relative risk <sup>(2)</sup>
<i>physical factors</i>			
<i>chemical:</i>			
- air pollution in the workplace	aetiology	++	1.1-6
	course	++	
- air pollution in the home (NO <sub>2</sub> )	aetiology	a	
	course	+	
- air pollution outdoors	aetiology	a	
	course	++	
- passive smoking	aetiology	++	4.8
	course	+	
<i>biotic</i>			
- viruses	aetiology	+	4.8
	course	++	
- allergens	aetiology	++	
	course	++	
- bacteria	course	+	
<i>physical</i>			
-cold, fog	course	++	
<i>lifestyle factors</i>			
- smoking	course	+	
- nutrition	aetiology <sup>(3)</sup>	a	
-additives	course	a	
- physical activity	course	+	

(1) ++ = convincing, + = strong indications, a = some indications

(2) relative risks are only known for some determinants

(3) both positive and negative associations are known for this determinant

The lack of a convincing burden of proof may indicate that there is no connection. However, it can also indicate that there is a lack of research in a given area.

It should be clear that there can be various points of application for interventions in CNSLD. In order to set priorities it is also important to distinguish between the different phases of the disease. In this way a distinction can be drawn between aetiology and course. Tackling the aetiology in particular would enable CNSLD to be prevented. As far as the cost to the health service is concerned, both the aetiology (in connection with prevention) and the course of the disease are extremely important. Periods of air pollution may, for example, cause an increased incidence of hospital admissions among CNSLD patients (Andersen et al., 1997).

Table 4.2 Summary of the exogenous determinants of COPD (source: Maas, 1994)

	influence on aetiology/course	burden of proof <sup>(1)</sup>	relative risk <sup>(2)</sup>	
<i>physical factors</i>				
<i>chemical:</i>				
- air pollution in the workplace	aetiology	++	1.4-1.8	
	course	++		
- air pollution outdoors	aetiology	a		
	course	++		
- passive smoking	aetiology	a		
	course	++		
<i>biotic</i>				
- viruses	aetiology	+	5-11 10-16	
	course	++		
- bacteria	course	+		
<i>physical</i>				
-cold, fog	course	++		
<i>lifestyle factors</i>				
- smoking	aetiology	++	5-11 10-16	
	course	++		
- nutrition	aetiology <sup>(3)</sup>	a		
- supplements	course	+		
- physical activity	course	+		

(1) ++ = convincing, + = strong indications, a = some indications

(2) relative risks are only known for some determinants

(3) both positive and negative associations are known for this determinant

A distinction can also be made between asthma and COPD. This distinction runs virtually parallel to age. The fact that children who have (or have had) asthma often develop symptoms of COPD in later life means that intervention against the determinants of asthma can affect the occurrence of COPD in such elderly individuals.

## **4.5 Prioritization of determinants on the basis of health gains to be achieved by interventions**

A further prioritization of the determinants of CNSLD can be carried out on the basis of potential health gains. To this end it is important to make a quantitative estimate of the contribution that each of the selected determinants makes to CNSLD. This contribution can be expressed as the Population Attributive Risks (PAR). This measure is used to indicate the proportion of a disease in a population that can be ascribed to exposure to a given determinant. The PAR is calculated by combining prevalence figures (of the risk factor) with the strength of the connection between risk factor and disease. The PAR is an indicator of the level of health gain that can theoretically be achieved by entirely eliminating the risk factor (Hoogeveen and Jansen, 1997).

Not all of the information required is available in an appropriate format so it is impossible to calculate PAR in the same way for all of the determinants of CNSLD. This explains why, for example, there are differences between the available studies in the operationalization of CNSLD, the operationalization (and the cut-off points) of the determinants of CNSLD, the methods used and the composition of the test population. The absence of a reliable relative risk or of a figure for prevalence renders the calculation of a PAR impossible. Accordingly, in VTV-1997 it was only possible to present PARs for smoking and fine dust.

The PARs for fine dust or particulate air pollution are derived from data that was collected at the international level. The complaints concerned (upper respiratory tract, lower respiratory tract, asthma attacks) differ in prevalence, and their relationship to exposure to particulate air pollution also differs in strength. An effective comparison of these PARs with those associated with smoking is not possible since the operationalizations differ, as does the age of the test population. It seems that smoking makes a larger contribution. However, what is also important for potentially influencing the determinant of particulate air pollution is that the greater part of such air pollution originates from foreign sources (60-80%).

In order to achieve some prioritization, several items of data on prevalence and degree of risk have been combined in table 4.3. These relate to various factors that are susceptible to intersectoral influence and that exhibit a clear connection to CNSLD (on the basis of tables 4.1 and 4.2). These include smoking, allergens and air pollution.

Table 4.3 Prevalence, risk and the contribution of risk factors to CNSLD

determinant	Prevalence	estimated risk	contribution of risk factor/ PAR
- smoking (smoker/non-smoker)	men aged 15 +: 36% (source: Stivoro) women aged 15+: 28% 20-60: 38% (source MORGEN)	COPD: Relative Risk: 4.6-11.4 (Maas, 1994)	men aged 20-59: 77 (VTV 1997) women aged 20-59: 76 (VTV 1997) men aged 60+: 72 (VTV 1997) women aged 60+: 61(VTV 1997)
air pollution: - OZONE - SO <sub>2</sub> , - NO <sub>2</sub> , - Aerosol	-17-28 days per annum, 8-hour standard exceeded (100 µg. m <sup>3</sup> ) (source: VTV-1997)	- 1.04 <sup>1</sup> (source: Anderson et al, 1997) - 1.02 <sup>1</sup> (Anderson et al, 1997) - 1.02 <sup>1</sup> (Anderson et al, 1997) - 1.02 <sup>1</sup> (total suspended particles) (Anderson et al, 1997)	3.7% of hospital admission for respiratory complaints, 10% of visits to GP in connection with respiratory complaints (VTV 1997)  respiratory complaints in children aged 7-12: 8%-17% (VTV-1997)
indoor environment - NO <sub>2</sub> - dust - humidity - mould - dust mite (2 µgram/gram dust) - dust mite (10 µgram/gram dust) - environmental smoke	86% (in autumn)(Verhoeff, 1994) 36% (winter)(Van der Lucht et al., 1996) 55% (in autumn) (Verhoeff,1994) 8-13% (winter) (Van der Lucht, 1996)	(positive association with dust mite)  age 11: 4.8 (Sporik et al., 1990)	68% 28%-38% asthma in children aged < 15: 8-13%
air pollution in the workplace: dust, gases, vapours.		men aged 40-59: Relative Risk = 1.4-1.8 (Heederik et al., 1992)	10-30% (Heederik 1990)

<sup>1</sup> Relative Risk per increase of 50 micrograms per m<sup>3</sup> (Anderson et al., 1997)

Table 4.3 shows that the requisite information is lacking in several areas and that it is impossible to calculate a PAR in the same way for each determinant. The highest PARs found are those for the determinant 'smoking'. Complete prohibition of smoking would prevent more than 70 percent of all cases of CNSLD. However, it is more difficult to estimate the contribution made by air pollution. This makes it difficult to determine the concentrations that will produce an effect on the respiratory tract and the portion of the population that will be exposed to such concentrations. Research has identified various substances that affect the respiratory tract. Exposure to OZONE is the most important of these factors. Air pollution particularly seems to influence the course of CNSLD, and during periods of elevated concentrations this can result in an increase in hospital admissions and visits to GPs.

Of all the factors in the indoor environment that can be involved, the influence of the dust mite is the best understood. Research in this field has also shown that it is difficult to determine which concentrations will produce an effect. In the case of dust mites, a threshold of 10 microgram Derp I per gram of dust is used as the level at which effects on the respiratory tract can occur. The relative risk at a threshold of 10 micrograms is 4.8 (Sporik et al, 1990). However, prevalence estimates of how often children are exposed to such concentrations vary widely. This is because the amount of allergen found is largely dependant on the time of year and the object or location in which the sample was taken. Taking a prevalence of 55%, which was measured by researchers in the Netherlands during the Autumn, this produces a PAR of 68%. The contribution made by environmental smoke to CNSLD in children up to the age of 15 is estimated to be 8-13 percent.

Exposure in the workplace to substances that can cause CNSLD contributes to 10-30 percent of CNSLD in men aged 20-59. Complete elimination of this factor will only affect the working population.

In order to impose prioritization on the basis of anticipated health gains, then smoking would be selected for COPD and the indoor environment (allergens) for childhood asthma. Smoking, in the form of environmental smoke, also contributes to the development of asthma in children.

## 4.6 Opportunities for exerting influence

Within the broad description of policy sectors that can influence these determinants, a distinction is made between three determinants (clusters), namely:

- smoking and environmental smoke
- allergens and the quality of the indoor environment
- air pollution

This classification does not cover air pollution in the workplace. The opportunities for influencing such air pollution are largely the same as those for influencing the indoor environment. This is partly a question of policy relating to working conditions, which shows some similarities to the effect of the determinant 'hazardous substances' (section 3.5).

This paragraph will consider in greater detail the opportunities for influencing smoking and dust mites (indoor environment). The greatest health benefit to be reaped in relation to these factors is in the area of CNSLD.

*smoking*

The following areas were identified in section 3.4. Policy can be implemented in these areas to influence smoking:

- dissemination of information
- product information
- advertizing
- duties and prices
- sales limits
- no-smoking zones
- enforcement

In the context of government measures to curb tobacco use, the state uses instruments in the above areas in order to reduce the percentage of smokers and total tobacco consumption. The efficacy of government measures was just one of the aspects examined by a recent health impact report on this policy, which was commissioned by the NSPH (Willemsen et al., 1998).

The results given in this report are summarized in the table below.

*Table 4.4 Summary of the effects of government measures to curb tobacco use (Willemsen et al., 1998)*

measure	effect	change in smoke prevalence	remarks
dissemination of information (GVO)	- stopping - starting	0/-7%	campaigns that reach wide audiences have the least effect, but a large potential effect; important in combination with other measures
product labelling	- public opinion - quantity - stopping	possible effect on 0.1%-8% of ex-smokers = -0.2%, -1.3%	still considerable scope for legislation on labelling (plain packaging)
advertising	- starting smoking	-6%	only effective where there is a general ban on tobacco advertising most effective in combination with other measures
duties	- starting - quantity - stopping	-5% (with 10% increase)	young people and lower SES (socio-economic status) groups more affected by price increases
sales limit	- consciousness-raising	none, little	probable restraining effect on youngest age groups, provided there is sufficient focus on compliance
smoking ban - public areas - workplace	- no smoking =standard - less social acceptance	little -5.6%	influence on public opinion; only with total coverage and effective enforcement, and in combination with the dissemination of information
enforcement	- compliance		necessary for effects of bans and restrictions

The above summary shows that, in terms of effect, the best results can be expected from advertising limitations, price increases and smoking bans in the workplace. Most measures are most effective when used in combination with other measures. In addition, the enforcement of bans and restrictions is very important if the desired effect is to be achieved.

With regard to pricing policy, the Ministry of Finance has an important part to play. After all, this ministry possesses the instruments required to implement such a policy (duties and sales tax). The Consumer Tax Legislation Directorate can use fiscal measures in an attempt to implement a non-fiscal policy, such as a government measures to curb tobacco use. The appropriate use of instruments can increase prices by 10 percent to produce a fall in the prevalence of smoking by 5%. Assuming a PAR of about 75% for CNSLD, this means that a price increase of this magnitude would produce a drop of 3.75% in the number of cases of CNSLD. A reduction of 3.75 percent in the cost of CNSLD to the health service is equivalent to a saving of EURO 17,6 million.



Similar calculations can be made for an advertizing policy and a smoking ban in the workplace. The ultimate savings, given that the measures are generally applied, are in the same order of magnitude. The most important ministry in terms of the restriction of advertizing is the Ministry of Education, Culture and Science. Agreements can be made or regulations drawn up in the media policy with the aim of restricting advertizing. This can only be expected to achieve an effect if there is a general ban on advertizing. In terms of smoking bans in the workplace, the Ministry of Social Affairs and Employment (Working Conditions Department) an important partner. For most measures it is true to say that the greatest effects can be expected when they are used in combination with other measures and when there is effective monitoring of compliance with the legislation. The Health Protection Inspectorate (Ministry of Health, Welfare and Sport) can play an important part in such monitoring. The Factory Inspectorate and the Ministry of Justice can also make an important contribution in this area.

#### *dust mites*

With regard to areas where policy can be implemented to influence allergens (including dust mites) in the indoor environment, section 3.6 identifies the following fields.

- dissemination of information on influencing the indoor environment
- tax/subsidy (pricing policy regarding housing improvement measures)
- building regulations
- standardization
- enforcement

The ministry with the greatest influence on all of these areas is the Ministry of Housing, Spatial Planning and the Environment (Directorate-General for Public Housing). The quality of the indoor environment is strongly associated with the characteristics of houses. A study carried out by the Municipal Health Service in Groningen (Van der Lucht et al., 1996) showed that 31 percent of the variation in the concentration of dust mite allergens could be attributed to the housing characteristics and indoor behaviour patterns. If it is assumed that the Ministry of Housing, Spatial Planning and the Environment can reduce the incidence of transgression of the 10 microgram standard by 31 percent, this would reduce produce an exposure of 38% instead of 55%. The PAR will then be 59% instead of 68%, which corresponds to a reduction in the incidence of asthma by 9 percent.

The widespread implementation of energy efficiency measures has brought about a situation in which large amounts of allergens can concentrate in dwellings.

The concentrations of dust mite allergens can be favourably influenced by improving ventilation facilities and by influencing the behaviour of the residents. Energy-efficiency measures (insulation) can have counter-productive effects on allergen concentrations which, in turn, can lead to the occurrence of asthma in children.

In the national building decree (<http://www.minvrom.nl/wonen/bouwbesluit> (31-3-1999)) of the Ministry of Housing, Spatial Planning and the Environment performance requirements are formulated with regard to the construction of houses and to existing houses. The contents of this

decree include regulations dealing with damp-proofing, ventilation and energy efficiency. The decree even states that health interests are just as important as energy efficiency. Further elaboration of guidelines that specifically target allergens in the indoor environment, coupled with strict compliance, can make an important contribution to reducing exposure to mite allergens. This will have a beneficial effects in terms of asthma in children.

## 4.7 Discussion

This section contains a calculation for two major determinants of CNSLD. The purpose is to determine the potential level of health gains that can be achieved by an intersectoral policy review. This illustrates the overall health gains that can be achieved when an intersectoral policy review is implemented in an optimal manner. The elaboration of the determinant 'smoking' highlighted a determinant that is of great relevance to the intersectoral policy review. Besides CNSLD, the effects of smoking include cardiovascular diseases and lung cancer. Accordingly, measures in the area of smoking will produce health gains with regard to these disorders. In addition to the determinants that have already been elaborated, section 3 identifies many other determinants that are susceptible to influence by means of the intersectoral approach.

For many of the health problems described in this report, setting priorities for an intersectoral policy review on the basis of the potential health gains to be achieved is quite a tricky matter. As far as the majority of the relevant determinants is concerned, it is impossible to arrive at a reliable estimate of the potential health gains. This is because too little is known about the incidence of these determinants and about the firmness of their association with the health problems in question.

## 5. Conclusion

For the purposes of this study, the policy sectors (other than the Ministry of Health, Welfare and Sport) selected were those with the ability to influence the determinants of five major health problems. One of the purposes of this analysis was to provide insights that could be used when developing the intersectoral policy review at the Ministry of Health, Welfare and Sport.

The elaboration of the health problems in VTV diseases and the associated determinants already indicates the large number of determinants that are involved in these health problems. The whole picture is elaborated still further in the following step, which is the identification of policy sectors that may be able to influence the determinants. This showed that a very large number of policy sectors (60 in all) are able to contribute to the intersectoral policy review in the area of the five health problems in question. In addition, it emerged that almost all ministries (9 in all) are potentially involved to some extent. Some ministries are mainly involved with one specific determinant, for example the Ministry of Agriculture, Nature Management and Fisheries and the determinant 'nutrition'. Other ministries and policy sectors can be involved with a large number of determinants, mainly because these ministries possess the range in instruments required to implement an intersectoral policy review. Some examples would be Education (dissemination of information), Finance (pricing policy) Justice and Police (enforcement and monitoring).

The exercise proved to be more difficult for some health problems and/or determinants than others. In the case of some health problems, either relatively little was known about the determinants themselves or the definitions of the determinants were very broadly phrased. This was the case, for example, with psychological disorders (depression and alcohol dependence). In the case of the determinant 'mental stress' also (which, via increased blood pressure, can influence cardiovascular diseases), it was no simple matter to indicate which policy sectors were directly involved. In the case of these determinants, one tends to end up with sectors in the area of general social policy. This is a very broad area, one in which the link to health is somewhat less direct than in the case of smoking, for example. Nevertheless the analysis has highlighted the fact that a general social policy is certainly far from unimportant in the context of an intersectoral policy review.

In the second part of this study an attempt was made to prioritize matters for the intersectoral policy review on the basis of the potential health gains to be obtained. Furthermore it was decided to further elaborate a single clinical picture, namely CNSLD, about which relatively much is known. Despite this, it remains extremely difficult to arrive at a prioritization. This is because the requisite information concerning prevalence and degree of risk is often missing or cannot be properly compared from one determinant to another. Nevertheless, in the case of the disorder CNSLD, two determinants have been identified that might be given priority in an intersectoral policy review. These are the determinants 'smoking' and 'allergens in the indoor environment'. In the area of smoking the best results can be expected from general advertising restrictions, price increases and smoking bans. Important players in this connection are the Ministry of Finance, the Ministry of Education, Culture and Science and the Ministry of Social Affairs and Employment. Allergens in the indoor environment are a problem that can largely be laid at the door of the Ministry of Housing, Spatial Planning and the Environment (Housing).

Measures put in place by the above-mentioned ministries can result in considerable health gains and considerable savings for the health service in terms of the costs associated with CNSLD. Nevertheless, it remains extremely difficult to arrive at a prioritization within the intersectoral policy review on the basis of the potential health gains to be achieved, simply because a great deal of information is missing. More clarity concerning the contribution of determinants to health problems is required. While little or no information is available in this area, prioritization will have to be carried out in another way. One possibility would be an analysis of proposed and currently implemented policy at the various departments. This would provide the basis for a stocktaking exercise to see which of the above-mentioned possibilities for exerting influence are already being used and which are not. Those options that are not currently being used could then be given priority. However, it would be important to monitor these options in terms of their political feasibility. Preference should be given to influence options where there is a concordance of interests.

## **Acknowledgements**

The authors would like to express their gratitude to all those who have contributed to the production of this report. Special thanks go to Gerard Varela Put and Frans van Zoest of the NSPH, who continually made major contributions to the realization and elaboration of the question. Our thanks also to Professor Roscam-Abbing for his contribution. Within the RIVM (VTV) Mirjam Busch and Manon Jansen (trainee at VTV during our study) have played a pertinent role in reading and discussing various draft versions of the report, for which our thanks.

Fons van der Lucht and Jan Jansen



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## Appendix 1            Mailing list

1	Director-General of the National Institute of Public Health and the Environment
2	Director-General of public health
3-17	Minister of Health, Welfare and Sport
18-22	Kleine Committee (Ministry of Health, Welfare and Sport: Supervision Committee for the support function of the NSPH intersectoral policy review) Council for Health and Social Service (Zoetermeer)
27	President of the Health Council
28	“Intersectoral Policy Review” project group, Council for Health and Social Service
29	Depot for Dutch Publications and Dutch Bibliography
30	Prof. D Kromhout
31	Dr. PGN Kramers
32	Dr. H. van Oers
33	J Jansen
34	Dr. F van der Lucht
35	G Varela-Put (Netherlands School of Public Health)
36	F. van Zoest (Netherlands School of Public Health)
37	Ms M Busch
38	Ms M Jansen
39	Ms I. Maas
40	Ms L Samson (Ministry of Health, Welfare and Sport)
41	Ms L.M. van Herten (Netherlands Organisation for Applied Scientific Research)
42	B v.d Loo (member of Municipal Health Service)
43-47	SBD (schools advisory service)/Dissemination of information and Public Relations
48	Report Registration Office
49	Library of the National Institute of Public Health and the Environment
50-59	Report Administration Office
60-321	Netherlands School of Public Health
322-350	Spare copies

## Appendix 2 Descriptions of the missions and tasks of policy sectors

HOME AFFAIRS	<p>Police Department:</p> <p><b>‘Task:</b></p> <ul style="list-style-type: none"> <li>- promoting public order and safety by setting up and maintaining a police force, by formulating legal frameworks, and by establishing conditions and clear areas of responsibility on the basis of which the police and the public administration can carry out their duties and exert their authority, in collaboration with other responsible parties where necessary;</li> <li>- to focus on improving the safety by improving the quality of police work and by encouraging between the police and other organizations in their environment.</li> </ul> <p>(source: <a href="http://www.sdu.nl/staatsalmanak/hierarchie.htm">http://www.sdu.nl/staatsalmanak/hierarchie.htm</a>, 1-4-1999)</p>
	<p>Major cities project</p> <p><b>‘Task:</b> Coordinating policy on the major cities, both internally and interdepartmentally and in consultation with the cities involved.’</p> <p>(source: <a href="http://www.sdu.nl/staatsalmanak/hierarchie.htm">http://www.sdu.nl/staatsalmanak/hierarchie.htm</a>, 1-4-1999)</p>
	<p>Minorities Integration Coordination Department</p> <p><b>‘Task:</b></p> <ul style="list-style-type: none"> <li>- support the Minister for Home Affairs in his work as coordinator of policy towards ethnic minorities and caravan dwellers and in his task as coordinator of the rehousing of refugees and asylees with residence permits in municipalities;</li> <li>- development and implementation of the remigration policy’</li> </ul> <p>(source: <a href="http://www.sdu.nl/staatsalmanak/hierarchie.htm">http://www.sdu.nl/staatsalmanak/hierarchie.htm</a>, 1-4-1999)</p>
Economic Affairs	<p>Market Forces Department</p> <p><b>‘Task:</b> Promoting the free and balanced functioning of the market economy by removing obstacles posed by rules, agreements and conduct (both in the public and private spheres) which are not in the peoples’ general interest;</p> <ul style="list-style-type: none"> <li>- the prevention or opposition of unwanted or unacceptable repercussions of the effects of free market forces’</li> </ul> <p>(source: <a href="http://www.sdu.nl/staatsalmanak/hierarchie.htm">http://www.sdu.nl/staatsalmanak/hierarchie.htm</a>, 1-4-1999)</p>
	<p>Directorate of Spatial Economic Policy</p> <p><b>‘Task:</b></p> <ul style="list-style-type: none"> <li>- Realizing a spatially balanced development of economic activities and the promotion of a maximum contribution by the regions to the development of national prosperity;</li> <li>- management of economic interests in relation to government policy in the area of environment, spatial planning, infrastructure and mobility;</li> <li>- strengthening the industrial environment, the traffic and transport infrastructure and the administrative environment within which internationally oriented industry has to operate;</li> <li>- increasing the amount of tourism to the Netherlands and within the Netherlands;</li> <li>- integrating components of the Economic Affairs policy into the policy of local governments and contributing to the Economic Affairs policy on the basis of the current regional situation’</li> </ul> <p>(source: <a href="http://www.sdu.nl/staatsalmanak/hierarchie.htm">http://www.sdu.nl/staatsalmanak/hierarchie.htm</a>, 1-4-1999)</p>
	<p>MDW operation</p> <p>‘The MDW operation was started by the previous Cabinet to tackle regulations and competition in a rapid and targeted way. Its task was to improve and streamline regulation and to increase competition. The current Cabinet is continuing the MDW project</p> <p>In specific terms, the MDW operation works along three lines:</p> <ol style="list-style-type: none"> <li>1. Targeted projects are undertaken in which current regulations for a given sector or market are</li> </ol>

	<p>closely examined. Some examples are the recently modified regulations governing shop opening hours and those concerning the legal profession. Broader themes are also tackled, such as the quality of European regulations.</p> <p>2. The MDW operation devotes separate and special attention to the administrative rigmarole to which companies are subjected. This includes, in part, obligations regarding the Inland Revenue and the Netherlands Central Bureau of Statistics.</p> <p>3. Since new legislation is constantly being added to the statute books, this too is subjected to a structured examination to determine what effects it will have on companies, on the environment and on the quality of the laws'</p> <p>source: <a href="http://www.minez.nl/mdw/fs_mdw.htm">http://www.minez.nl/mdw/fs_mdw.htm</a> 4-1-1999)</p>
	<p>General technology Policy Directorate</p> <p>'Task:</p> <ul style="list-style-type: none"> <li>- Formulating policy in the area of technology, knowledge and enterprising skills;</li> <li>- promotion of the link between the infrastructure of public expertise for research and training in industry;</li> <li>- promoting the diffusion of expertise into industry;</li> <li>- promotion of acceptance and integration of technology in society.'</li> </ul> <p>(source: <a href="http://www.sdu.nl/staatsalmanak/hierarchie.htm">http://www.sdu.nl/staatsalmanak/hierarchie.htm</a>, 1-4-1999)</p>
	<p>Energy Efficiency and Sustainable Energy Directorate</p> <p>'Task:</p> <ul style="list-style-type: none"> <li>- promoting the efficient use of energy in all sectors of energy management, both in terms of conversion and of use;</li> <li>- see to the development and introduction of sustainable energy'</li> </ul> <p>(source: <a href="http://www.sdu.nl/staatsalmanak/hierarchie.htm">http://www.sdu.nl/staatsalmanak/hierarchie.htm</a>, 1-4-1999)</p>
	<p>General Economic Politics Directorate</p> <p>'Task:</p> <ul style="list-style-type: none"> <li>- dealing with general questions regarding policy and the coordination of matters that come under more than one part of the ministry, including contact with Parliament;</li> <li>- matters concerning the Netherlands Central Bureau of Statistics and the Central Planning Bureau;</li> <li>- studying the structure and state of the Dutch economy;</li> <li>- preparing general economic measures and giving advice about them;</li> <li>- running the secretariat of the National Planning Commission'</li> </ul> <p>(source: <a href="http://www.sdu.nl/staatsalmanak/hierarchie.htm">http://www.sdu.nl/staatsalmanak/hierarchie.htm</a>, 1-4-1999)</p>
	<p>Manufacturing and Heavy Industry Directorate</p> <p>'Task:</p> <ul style="list-style-type: none"> <li>- shaping and implementing industrial policy in mechanical engineering (including environmental technology, as well as supply and contracting out), metallurgy (including materials technology) and transport resources both for the national and international aspects;</li> <li>- conducting the mediation function of the Directorate-General for Industry and Services on behalf of individual companies and industrial organizations in the branches of industry in question'.</li> </ul> <p>(source: <a href="http://www.sdu.nl/staatsalmanak/hierarchie.htm">http://www.sdu.nl/staatsalmanak/hierarchie.htm</a>, 1-4-1999)</p>
	<p>European Integration Department</p> <p>'Task:</p> <ul style="list-style-type: none"> <li>- Promoting the expansion and strengthening of the European domestic market for Dutch industry;</li> <li>- strengthening the operation of the Internal Market, the creation of an advantageous starting position in this market for Dutch industry;</li> <li>- promoting the widening of the Internal Market by the addition of new members or association accords, improving access to that market;</li> <li>- handling complaints from Dutch industry (or making sure that these are dealt with by others) regarding the operation of the Internal Market and that of the markets of states that are candidates for membership;</li> <li>- optimizing the design, application and implementation of the EU's range of instruments relating to</li> </ul>

	<p>commercial policy; - developing long term visions of the operation of the European market and promoting consistent Economic Affairs policies in a European context' (source: <a href="http://www.sdu.nl/staatsalmanak/hierarchie.htm">http://www.sdu.nl/staatsalmanak/hierarchie.htm</a>, 1-4-1999)</p>
Finance	<p><b>Consumer Tax Legislation Directorate</b> 'The field of responsibility of the Consumer Tax Legislation Directorate is policy-preparation and regulations in areas such as sales tax, duties, road tax and environmental taxes. This means that the department's work is both nationally and internationally oriented. Some major current developments in which the department is involved are the European internal market and the use of fiscal instruments for non-fiscal policy objectives. Hence the directorate is closely involved with the abolition of fiscal frontiers within Europe. The further extension and deepening of the associated regulations is still under close scrutiny. In this context, the directorate is participating in various international consultation bodies. The influence of non-fiscal policy, in the areas of the environment, energy and transport can be seen at both national and international level. Legislation in the area of environmental taxes is attended to by a department that has been specially set up for this purpose. This department has recently been occupied with developing an energy levy for small users. This involves households paying tax for the use of electricity, natural gas and fuels used to replace natural gas. The objective of the levy is to bring about a change in citizens' behaviour. Those who save energy pay less tax. The energy levy has been developed in collaboration with the Ministry of Economic Affairs and the Ministry of Housing, Spatial Planning and the Environment. The new tax is an example of the way in which environmentally friendly behaviour can be encouraged by fiscal measures. One example of a fiscal measure in the area of transport is the 'Eurovignette' (common user charge) that is levied in several EU states for use of the motorways by trucks weighing 12 tons or more. The treaty which underlies this charge was designed by the directorate's staff in consultation with colleagues from Belgium, Luxembourg, Denmark and Germany. The national legislation was also designed by the directorate. The directorate is also involved in developments in the area of road-pricing.' source: <a href="http://www.minfin.nl/NL/alginfo/home_alg.htm">http://www.minfin.nl/NL/alginfo/home_alg.htm</a> (1-4-1999)</p>
	<p><b>Consumer Tax Directorate</b> 'Is it necessary to purchase a Eurovignette (common user charge) for a heavy lorry that never leaves its home country? This is a practical question, and one for which the directorate has an answer. The directorate's activities focus on policy relating to the implementation of consumer taxes. These include special tax on the sale of passenger cars, duties, inheritance tax and capital transfer tax. The directorate determines how the Inland Revenue should operate in terms of the practical implementation of these fiscal laws. They provide feedback about the practical information obtained from recent legislation to the legislative lawyers in the Directorate-General for Tax and Customs Policy and Legislation, so that any abuse can be tackled swiftly. The Consumer Tax Directorate has about 30 members of staff, most of whom have a fiscal-legal background' source: <a href="http://www.minfin.nl/NL/alginfo/home_alg.htm">http://www.minfin.nl/NL/alginfo/home_alg.htm</a> (1-4-1999)</p>
	<p><b>Direct Taxes Department</b> 'The Direct Taxes Department advises leaders in the political arena and in the civil service regarding the development of policy for laws and regulations in the area of direct taxation. In addition, the department is involved in the development of legislation by evaluating bills in terms of their feasibility of implementation. The department also designs, influences and coordinates the preparation and formulation of policy. The department also provides technical support for duties and legal support where this is required, as well as disseminating information in this area. The department's work is practical in nature and targets both long-term objectives and unanticipated current social and political events. The Direct Taxes Department has a staff of about 60, most of whom have a fiscal-legal or fiscal-economic background' source: <a href="http://www.minfin.nl/NL/alginfo/home_alg.htm">http://www.minfin.nl/NL/alginfo/home_alg.htm</a> (1-4-1999)</p>
Justice	<p><b>MDW operation</b> 'The MDW operation was started by the previous Cabinet to tackle regulations and competition in a</p>

	<p>rapid and targeted way. Its task was to improve and streamline regulation and to increase competition. The current Cabinet is continuing the MDW project</p> <p>In specific terms, the MDW operation works along three lines:</p> <ol style="list-style-type: none"> <li>1. Targeted projects are undertaken in which current regulations for a given sector or market are closely examined. Some examples are the recently modified regulations governing shop opening hours and those concerning the legal profession. Broader themes are also tackled, such as the quality of European regulations.</li> <li>2. The MDW operation devotes separate attention to the administrative rigmarole to which companies are subjected. This includes, in part, obligations regarding the Inland Revenue and the Netherlands Central Bureau of Statistics.</li> <li>3. Since new legislation is constantly being added to the statute books, this too is subjected to a structured examination to determine what effects it will have on companies, on the environment and on the quality of the laws.' <p>source: <a href="http://www.minez.nl/mdw/fs_mdw.htm">http://www.minez.nl/mdw/fs_mdw.htm</a> 1-4-1999)</p> </li></ol>
	<p><b>Legislation department</b></p> <p>The Legislation Department is responsible for the development and realization of new laws and regulations, and for the administration and maintenance of current legislation.</p> <p>This applies to legislation for the Ministry of Justice, legislation for other ministries and international legislation.</p> <p>The partners in the legislative process are the Upper and Lower Houses of Parliament, the Council of State, other ministries, the European Union and the united Nations.</p> <p>source: <a href="http://www.minjust.nl/b_organ/organisa/b1_5/dw/dw.htm">http://www.minjust.nl/b_organ/organisa/b1_5/dw/dw.htm</a> (1-4-1999)</p>
	<p><b>Prevention, Juvenile Crime and Sentencing Policy Department</b></p> <p>Criminality is on the increase. Accordingly, prevention is becoming more important. Prevention can provide a safer social climate, it can enhance citizens' feelings of security and it can reduce the number of criminal trials.</p> <p>Youths are increasingly involved in crimes, either as perpetrators or victims.</p> <p>Furthermore, imprisonment and fines are no longer the only response to punishable offences. It is developments of this kind, as well as their mutual coherence, that occupy the Prevention, Juvenile Crime and Sentencing Policy Department (DJPS).</p> <p>source: <a href="http://www.minjust.nl/b_organ/organisa/b1_4/dpjs/dpjs.htm">http://www.minjust.nl/b_organ/organisa/b1_4/dpjs/dpjs.htm</a> (1-4-1999)</p>
	<p><b>Enforcement department</b></p>
Agriculture	<p><b>Netherlands Nutrition Centre</b></p> <p>The department of veterinary, food and environment matters has administrative responsibility for the Netherlands Nutrition Centre Foundation</p>
	<p><b>Department of Agriculture</b></p> <p>The Department of Agriculture is responsible for policy for the agrarian sector, and for primary production in particular. The Department of Agriculture devotes itself to the goal of durable and socio-economically vigorous agriculture that develops in harmony with the other functions of rural areas and with the social environment.</p> <p>source: <a href="http://www.minlnv.nl/lnv/index07.html">http://www.minlnv.nl/lnv/index07.html</a> (1-4-1999)</p>
	<p><b>Department of Science and Knowledge Dissemination</b></p> <p>Knowledge policy is essential to the main objective of the Ministry of Agriculture, Nature Management and Fisheries. The use of the instruments of Research, Teaching and Information Dissemination must be coordinated.</p> <p>source: <a href="http://www.minlnv.nl/lnv/index07.html">http://www.minlnv.nl/lnv/index07.html</a> (1-4-1999)</p>

	<p><b>Department of Trade and Industry</b>  The mission of the Department of Trade and Industry (Ministry of Agriculture, Nature Management and Fisheries) is to be a "governmental partner for the agribusiness". This means that the department's role is to be a governmental interlocutor for the agribusiness (food, drink and tobacco industry, the agricultural commerce and service sectors, ancillary sector (to agribusiness) and the non-food agro-industry (partly in connection with the conversion of areas to agricultural purposes). It influences and helps to shape government policy that is relevant to agribusiness.</p> <p>The department's objective is to promote a sustainable and internationally competitive agribusiness, with a view to its contribution to the Dutch economy and to employment. In this connection, an essential area for special attention is strengthening the market-oriented production in the industrial column (chain reinforcement).</p> <p>source: <a href="http://www.minlnv.nl/lnv/index07.html">http://www.minlnv.nl/lnv/index07.html</a> (1-4-1999)</p>
	<p><b>Department of Veterinary, Food and Environment Matters</b>  The Department of Veterinary, Food and Environment Matters (VVM) is devoted to the health of plants and animals, for the development of an ethical policy framework relative to production methods and animal welfare, environment and the quality and public health aspects that are related to agricultural production. The Department of Veterinary, Food and Environment Matters sees to it that social developments are integrated into cohesive, sector-transcending policy frameworks and quality assurance systems that guarantee the cautious handling of risks to humans, animals and the environment</p> <p>source: <a href="http://www.minlnv.nl/lnv/index07.html">http://www.minlnv.nl/lnv/index07.html</a> (1-4-1999)</p>
	<p><b>Government Meat and Livestock Inspectorate</b>  The core task of the Government Meat and Livestock Inspectorate is to guarantee that the production and sale of animals, foodstuffs and other products of agricultural origin complies with requirements that are vital to the health of humans and animals, and to animal welfare.</p> <p>The tasks of the Government Meat and Livestock Inspectorate derive from a series of European directives and twenty national laws (as well as governmental orders in pursuance of those laws and those of Marketing Boards and trading organisations).</p> <p>source: <a href="http://www.minlnv.nl/lnv/index07.html">http://www.minlnv.nl/lnv/index07.html</a> (1-4-1999):</p>
	<p><b>Council on Animal Affairs</b>  The Department of Veterinary, Food and Environment Matters has administrative responsibility for the Council on Animal Affairs</p>
	<p><b>Department of Rural Areas and Recreation</b>  'More space, greater humanity' is the motto of the Department of Rural Areas and Recreation (GRR). The department devotes itself to the sustainable development of the green belt and to making the Netherlands more attractive in terms of recreational facilities. GRR is guided in this by several themes, such as:</p> <ul style="list-style-type: none"> <li>• a quality of life theme, a well-developed green belt is important to both rural and urban populations</li> <li>• an economic theme, a sustainable green belt creates the conditions for a competitive agricultural sector and offers more opportunities for the growing recreational/tourist sector. This is of benefit to employment and business activity in the Netherlands</li> <li>• a nature theme, since the layout and administration of the green belt are the conditions for sustainable development of nature and landscape, something that is also important for people.</li> </ul>
Education	<p><b>Primary and Special Education Department</b>  Policy for primary schools, special education and special secondary education and the Educational Support Institute (OBD), training and refresher-course policy for teachers.</p> <p>source: <a href="http://www.minocw.nl/minister/bestdep.htm#3">http://www.minocw.nl/minister/bestdep.htm#3</a> (1-4-1999)</p>
	<p><b>Secondary Education Department</b>  Policy for preparatory vocational training, general secondary education and the national education support services.</p> <p>source: <a href="http://www.minocw.nl/minister/bestdep.htm#3">http://www.minocw.nl/minister/bestdep.htm#3</a> (1-4-1999)</p>
	<p><b>Vocational and Adult Education Department</b></p>

	<p>Policy for Secondary Vocational Education, Part-time Vocational Education, Adult General Secondary Education, basic education and work in socio-cultural education, disseminating information on courses and on careers guidance, Ministry of Education, Culture and Science contact employment service (Central Employment Board).</p> <p>source: <a href="http://www.minocw.nl/minister/bestdep.htm#3">http://www.minocw.nl/minister/bestdep.htm#3</a> (1-4-1999)</p>
	<p>Higher Professional Education Department</p> <p>Policy for higher professional education: bearing costs, biannual Higher Education and Research Plan (HOOP).</p> <p>source: <a href="http://www.minocw.nl/minister/bestdep.htm#3">http://www.minocw.nl/minister/bestdep.htm#3</a> (1-4-1999)</p>
	<p>Media Authority</p> <p>The Media Authority is a corporate body that was set up under the Media Act and which operates as an independent governing authority. The Media Authority is charged with enforcement (under administrative law) of the Media Act and of regulations based on the Act. The authority's job responsibilities include:</p> <ul style="list-style-type: none"> <li>• assigning broadcasting time to public broadcasting companies at local, regional and national level;</li> <li>• granting authorization to commercial broadcasting companies;</li> <li>• monitoring compliance with statutory regulations, for example those involving advertising and sponsoring.</li> </ul> <p>source: <a href="http://www.minocw.nl/minister/pag4.htm">http://www.minocw.nl/minister/pag4.htm</a> (1-4-1999)</p>
	<p>Media, Literature and Libraries Department</p> <p>Policy for the broadcasting system, the press, new media, the arts and libraries: multifunctionality and accessibility of information, its production, distribution of cultural manifestations, cultural participation and the promotion of reading.</p> <p>source: <a href="http://www.minocw.nl/minister/bestdep.htm#3">http://www.minocw.nl/minister/bestdep.htm#3</a> (1-4-1999)</p>
	<p>Research and Science Policy Department</p> <p>Coordination of scientific policy: research organizations, university research, part of the research financed by the government, information policy, European scientific and technology policy.</p> <p>source: <a href="http://www.minocw.nl/minister/bestdep.htm#3">http://www.minocw.nl/minister/bestdep.htm#3</a> (1-4-1999)</p>
	<p>Cultural Heritage Directorate</p> <p>Policy on cultural heritage, state collections, museums, archives, archaeology, preservation of monuments and historic buildings, cultural education, cultural participation by foreigners, relationship with preservation of cultural heritage and science.</p> <p>source: <a href="http://www.minocw.nl/minister/bestdep.htm#3">http://www.minocw.nl/minister/bestdep.htm#3</a> (1-4-1999)</p>
	<p>Cultural Policy Department</p> <p>Coordination of cultural policy, research and international contacts.</p> <p>source: <a href="http://www.minocw.nl/minister/bestdep.htm#3">http://www.minocw.nl/minister/bestdep.htm#3</a> (1-4-1999)</p>
Social affairs	<p>Working Conditions Department</p> <p>The Working Conditions Department is responsible for the development of policy on working conditions. The objective of this policy is to create safeguards for safe and healthy work, preventing the occurrence of disablement and promoting the reintegration of any workers who have become disabled.</p> <p>(source: <a href="http://www.minszw.nl">http://www.minszw.nl</a>, 7-4-1999)</p>
	<p>Factory Inspectorate</p> <p>The Factory Inspectorate is responsible for monitoring companies and organizations for compliance with legislation in the area of the Ministry of Social Affairs and Employment. This concerns regulations in the area of working conditions, industrial relations and the labour market.</p> <p>The Factory Inspectorate advises policy departments on the issue of whether regulations will work in practice and whether it will be possible to monitor compliance. In addition, the Factory Inspectorate advises citizens and companies about all sorts of laws and regulations.</p> <p>The Factory Inspectorate also carries out several statutory tasks, such as granting permits and declaring clauses in collective labour agreements to be generally binding.</p> <p>The employees of the Factory Inspectorate are also the 'eyes and ears' of the ministry. Details of their</p>

	<p>day to day experiences in the practical situation are passed on to the policy departments. They also give notification of new developments. If necessary, this information can be used to modify policy.</p> <p>The Factory Inspectorate has one central office and six regional offices. (source: <a href="http://www.minszw.nl">http://www.minszw.nl</a>, 7-4-1999)</p>
	<p><b>General Socio-economic Affairs Department</b> The General Socio-economic Affairs Department is responsible for the development of general socio-economic policy. The purpose of this is to expand the numbers of those participating in work, by promoting a favourable socio-economic policy. (source: <a href="http://www.minszw.nl">http://www.minszw.nl</a>, 7-4-1999)</p>
	<p><b>National Assistance Directorate</b> The National Assistance Directorate is responsible for the development of policy on supplementary benefit. The objective of this policy is to maintain a minimum income for those who require it and, where necessary, the promotion of an independent livelihood provision. (source: <a href="http://www.minszw.nl">http://www.minszw.nl</a>, 7-4-1999)</p>
	<p><b>Directorate of Social Security</b> The Directorate of Social Security is responsible for the development of policy with regard to social security. The objective of this policy is to give shape and content to the system of social security and supplementary pensions, and to strive to ensure that as few people as possible are forced to rely on social security. (source: <a href="http://www.minszw.nl">http://www.minszw.nl</a>, 7-4-1999)</p>
	<p><b>Labour Market Directorate</b> The Labour Market Directorate is responsible for the development of labour market policy. The purpose of this policy is the promotion of a labour market in which the maximum number of people are able to find work and as many job vacancies as possible can be filled. (source: <a href="http://www.minszw.nl">http://www.minszw.nl</a>, 7-4-1999)</p>
Transport	<p><b>Transport Sectors Directorate</b> <b>Task:</b> Charged with integration policy for the following transport sectors: shipping (including coastal shipping), road transport, inland waterways and rail transport; - responsible for the areas of market forces, stimulation of economic development of transport companies, infrastructural policy in the area of roads, waterways and railways, and international sectoral consultations; - endeavouring to achieve the liberalization of transport markets, international harmonisation of regulation and dependable conditions in the area of environment, safety and social aspects; - being responsible for the supervision of inspections and of implementation institutions in the area of the transport sectors. (source: <a href="http://www.sdu.nl/staatsalmanak/hierarchie.htm">http://www.sdu.nl/staatsalmanak/hierarchie.htm</a>, 7-04-1999)</p>
	<p><b>Innovation Directorate</b> <b>Task:</b> - Initiating and developing renewal of passenger policy on the basis of a strategic orientation in the field of the Directorate General for Passenger Transport; - giving notification of developments in the area of passenger transport; - critically assessing policy to determine whether or not policy is still sufficient in the light of new developments, and initiating innovations where necessary; - special focus is the interaction between policy on passenger transport and the areas of policy of other ministries, local authorities and the EU; - monitoring the policy of other ministries in the area of spatial planning, environment, economy, administrative organisation, international policy and technology policy, in addition to actively influencing these areas where required. (source: <a href="http://www.sdu.nl/staatsalmanak/hierarchie.htm">http://www.sdu.nl/staatsalmanak/hierarchie.htm</a>, 7-04-1999)</p>
	<p>The Royal Netherlands Meteorological Institute</p>



	<p><b>Task:</b></p> <ul style="list-style-type: none"> <li>- Conducting research into physical phenomena in the atmosphere, on the surface of the earth and in the sea;</li> <li>- placing the results of this work at the disposal of shipping, aviation, agriculture and other interested parties.</li> </ul>
	<p><b>Mobility market Directorate</b></p> <p><b>Task:</b> - Seeing to it that there is a better relationship between supply and demand in the passenger transport market, both in individual terms (bicycles, cars) and collective terms (buses, trains, taxis);</p> <ul style="list-style-type: none"> <li>- having a vision of the role of collective passenger transport;</li> <li>- strengthening market forces in the sector;</li> <li>- promoting a healthy relationship between the passenger transport sector and the government;</li> <li>- developing transport concepts that supplement traditional individual and collective passenger transport and of instruments that lead to the better attunement of supply and demand in the area of individual mobility.</li> </ul> <p>(source: <a href="http://www.sdu.nl/staatsalmanak/hierarchie.htm">http://www.sdu.nl/staatsalmanak/hierarchie.htm</a>, 7-04-1999)</p>
	<p><b>Traffic Safety and Vehicle Directorate (DGP)</b></p> <p><b>Task:</b> - Contributing to the realization of a lastingly safe traffic and transport system. The efforts made in this connection are aimed at infrastructure (road and rail), vehicle requirements and driver behaviour;</p> <ul style="list-style-type: none"> <li>- a major focus of attention is the integration of safety policy for the various modes of transport in the overall traffic and transport policy.</li> </ul> <p>(source: <a href="http://www.sdu.nl/staatsalmanak/hierarchie.htm">http://www.sdu.nl/staatsalmanak/hierarchie.htm</a>, 7-04-1999)</p>
	<p><b>Transport Safety Directorate</b></p> <p><b>Task:</b></p> <ul style="list-style-type: none"> <li>- Seeing to the safety of goods transport. This responsibility concerns both safety aspects of traffic and transport itself and the hazards to those who might potentially be affected (external safety). The safety aspects for traffic and transport concern the requirements placed on vehicles, payloads and hazardous substances, equipment, personnel and the use of infrastructure (including target group lanes, supervision of shipping, sailing regulations);</li> <li>- charged with the supervision of inspections in the area of safety.</li> </ul> <p>(source: <a href="http://www.sdu.nl/staatsalmanak/hierarchie.htm">http://www.sdu.nl/staatsalmanak/hierarchie.htm</a>, 7-04-1999)</p>
	<p><b>Consultative Committee for Traffic Safety</b></p> <p><b>Task:</b> Conducting consultations on components of the policy of the Ministry of Transport, Public Works and Water Management.</p> <p>(source: <a href="http://www.sdu.nl/staatsalmanak/hierarchie.htm">http://www.sdu.nl/staatsalmanak/hierarchie.htm</a>, 7-04-1999)</p>
	<p><b>The Ministry of Transport, Public Works and Water Management: transport research centre</b></p> <p><b>Task:</b> Promoting accessibility and quality of life in relation to rail traffic, road traffic and shipping by publishing integrated recommendations and supplying information on the basis of high-level expertise and research.</p> <ul style="list-style-type: none"> <li>- supplying this to ministries, other public authorities and special interest groups in general and to the Ministry of Transport, Public Works and Water Management in particular.</li> </ul> <p>(source: <a href="http://www.sdu.nl/staatsalmanak/hierarchie.htm">http://www.sdu.nl/staatsalmanak/hierarchie.htm</a>, 7-04-1999)</p>
	<p><b>The Ministry of Transport, Public Works and Water Management: Road and hydraulic engineering division</b></p> <p><b>Task:</b> Advising the road and hydraulic engineering sectors on technology and environmental issues.</p> <p><b>Explanation:</b> The Road and hydraulic engineering division translates technical and environmental expertise into comprehensible and usable recommendations across a wide range of topics in the area of road and hydraulic engineering.</p> <p>(source: <a href="http://www.sdu.nl/staatsalmanak/hierarchie.htm">http://www.sdu.nl/staatsalmanak/hierarchie.htm</a>, 7-04-1999)</p>
Housing	<p><b>National Land Use Planning Agency</b></p> <p>The National Land Use Planning Agency creates conditions for laying out the relatively small amount of space available to make the Netherlands beautiful, prosperous and rich in amenities, both now and in the</p>

	<p>future. (source: <a href="http://www.minvrom.nl/algemeen/">http://www.minvrom.nl/algemeen/</a>, 7-04-1999)</p>
	<p>Directorate-General for Public Housing <b>Mission:</b> "Seeing to it that each citizen has the most suitable living situation possible." The Directorate-General for Public Housing stands for achieving a long-lasting combination of residence, residential environment, occupant and immediate social environment, with space for individual development and responsibility, in which no categories are excluded on the basis of general values and standards. (source: <a href="http://www.minvrom.nl/algemeen/">http://www.minvrom.nl/algemeen/</a>, 7-4-1990)</p>
	<p>Directorate for Substances, Safety and Radiation <b>The mission of the Directorate of Substances, Safety, Radiation is:</b> 'Controlling the risks to the environment posed by substances (including radioactive substances and genetically modified organisms), of external safety hazards posed by radiation, and the dissemination of thematic coordination'. (source: <a href="http://www.minvrom.nl/algemeen/">http://www.minvrom.nl/algemeen/</a>, 7-4-1990)</p>
	<p>Air and Energy Directorate <b>The mission of the Air and Energy Directorate is</b> 'Seeing to it that there is sufficient political and social support for government policy that contributes to the awareness of air pollution in the broadest sense and that leads to the implementation of realistic measures for the promotion of good air quality'. (source: <a href="http://www.minvrom.nl/algemeen/">http://www.minvrom.nl/algemeen/</a>, 7-4-1990)</p>
	<p>Directorate for Drinking Water, Water and Agriculture <b>The mission of the Directorate for Drinking Water, Water and Agriculture is</b> 'The prevention and/or restriction of damage to the quality of surface water in general and of the soil, (including groundwater) and the air in particular'. (source: <a href="http://www.minvrom.nl/algemeen/">http://www.minvrom.nl/algemeen/</a>, 7-4-1990)</p>
	<p>Directorate for Noise Abatement and Traffic <b>The mission of the Directorate of Noise Abatement and Traffic is</b> 'Promoting the reduction and prevention of nuisance, particularly that caused by noise, and of the environmental effects produced by traffic'. (source: <a href="http://www.minvrom.nl/algemeen/">http://www.minvrom.nl/algemeen/</a>, 7-4-1990)</p>
	<p>Inspectorate for the Environment The mission of the Inspectorate for the Environment is: 'Together with other public bodies and institutions, seeing to it that environmental legislation is effectively implemented and enforced. In addition, the Directorate sees to it that policy stays well attuned to the practical situation'. (source: <a href="http://www.minvrom.nl/algemeen/">http://www.minvrom.nl/algemeen/</a>, 7-4-1990)</p>
	<p>Directorate for the Implementation and Coordination of Spatial Policy The core task of the Directorate is to see to it that spatial policy is reflected in policies developed and implemented by other departments, public authorities and those involved in spatial planning. Coordination is an important instrument in this respect (source: <a href="http://www.minvrom.nl/algemeen/">http://www.minvrom.nl/algemeen/</a>, 7-4-1990)</p>