

Societal Impact Team

Joining forces to be prepared for the next pandemic

Advice on pandemic preparedness on societal level

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1. Summary

The socio-economic impact of the COVID-19 pandemic and the measures taken to address it was enormous. People in society felt severe consequences both during the pandemic and after it. The government was partly successful in mitigating those consequences, for example by providing financial support for sectors that were closed down. Other effects have proved persistent or indeed irreparable. Examples include young people who incurred delays in their educational careers and damage to their mental health, and older individuals who were forced to spend the last stage of their lives in solitude.

According to experts, the question is not whether there will be another pandemic, but rather when. If we are to contain the societal damage of another pandemic as much as possible, we will need to be better prepared. Pandemic preparedness is crucial, from the perspective of infectious disease control but also in terms of preventing and mitigating the consequences for society. So what are we to do when a new pandemic is imminent? In such a situation, how do we create a comprehensive picture of the potential societal impact of the pandemic and the measures to fight it, and how do we ensure balanced decision-making regarding the pandemic response? And how can we prepare for such a situation in a period of relative calm?

In its advisory document 'Joining forces to be prepared for the next pandemic', the Societal Impact Team (MIT) provides answers to the above questions. First and foremost, the MIT recommends building up a solid knowledge base on the socio-economic impacts of pandemics and pandemic measures, and on compensating measures to mitigate those impacts. During the COVID-19 pandemic, there was a persistent lack of scientific and other knowledge, data and information necessary to provide an up-to-date societal image and detect changes in society in a timely manner. The information that served as input for decisions regarding pandemic measures was not well-balanced: there was a wealth of data about the coronavirus, but far too little information about the welfare of people and society as a whole. This can and should be improved. The MIT recommends using the current period of calm to invest in the availability of up-to-date and accurate information about societal impact. This will help to ensure a better balance between advice and decision-making during a pandemic, based on more reliable information.

Additionally, in the event of a new pandemic the MIT recommends using an assessment framework. The MIT has developed such an assessment framework and recommends that the authorities keep it up to date and practise with it in the years ahead. The assessment framework serves as the guide for issuing advice and making decisions regarding the response to a pandemic. It guides consultants, policymakers and administrators through the various phases of a pandemic and supports them in taking the steps required to ensure a well-founded, balanced and integrated assessment. The assessment framework includes several instruments that will help answer essential questions during the assessment process: how to create a picture of the societal impacts and how to assess the severity of those impacts? In which areas will those impacts be felt and which groups in society are likely to be the most affected by them? What societal developments can we expect: if we do nothing, if we take pandemic measures and/or if we take mitigating measures? What values does society prioritise above all others and how can we respect this in our assessment?

Pandemic preparedness on societal level also calls for action beyond the domain of knowledge and advice. The MIT recommends that attention for the socio-economic impact of pandemics and pandemic measures be reflected in the relevant statutory frameworks and in the government's policies and crisis management plans. In international agreements, too, the Netherlands should draw attention to societal impacts and to the importance of an integrated assessment of measures during the pandemic.

Finally, the MIT describes the role that the committee itself should continue to play in ensuring pandemic preparedness on societal level. The government has decided to put the MIT on standby effective 1 September 2024. When on standby, the MIT believes its tasks including testing the knowledge development effort, ensuring the continued development of the assessment framework, maintaining the network of experts and practitioners, and organising and participating in practice sessions. This is why the MIT recommends that while on standby, it should retain a core team of members and continue its independent advisory task with solid legal and organisational safeguards. This will ensure that the MIT itself will also remain prepared and, in the event of another pandemic, will be ready to take on the challenge in collaboration with the government, other advisors, experts and organisations from the world of practice.

2. Introduction

2.1 Pandemic preparedness on societal level

Earlier this year, in a letter to the informateur (the person investigating whether the proposed new cabinet could succeed), the MIT highlighted the huge importance of pandemic preparedness from a societal perspective. Pandemic preparedness means that there is attention not only for fighting the pandemic as such but also for mitigating or preventing, where possible, societal damage caused by the pandemic and the measures to control it. In this light, the MIT recommends that pandemic preparedness include a dual focus on fighting the pandemic and on the societal impact of the pandemic and the pandemic measures.

The COVID-19 crisis has taught us that the socio-economic impact of a pandemic and pandemic measures can be enormous.² Planning agencies, advisory bodies, knowledge institutions and the Societal Impact Team (MIT) have drawn attention to this in recent years.³ During the COVID-19 crisis, the economic effects were largely mitigated by support measures, but also because some economic productivity could continue as many employees worked from home. However, illness, isolation and quarantine caused a sharp increase in sickness absence figures, which had consequences for the tight labour market. In particular, healthcare capacity came under significant pressure.4 During the COVID-19 crisis, one in five adults experienced delays in healthcare, and postponed surgery resulted in the loss of 320,000 healthy life years.⁵ People were additionally confronted with mental health issues and lower levels of welfare, due in part to loneliness. 6 As the crisis continued, the sense of unrest among the population intensified, and there were signs of polarisation within certain groups. In addition, some effects have proved very persistent. For example, some young people are still struggling with the delays incurred in education8 and with mental health issues9. In addition, long COVID has brought the lives of 90,000 people in this country to a standstill¹⁰, more people are struggling with unhealthy lifestyles¹¹ making them particularly vulnerable to disease¹², and public trust in the government has decreased.¹³

To minimise the socio-economic damage from a pandemic and pandemic measures, it is crucial to be well-prepared for the next pandemic, also from a societal perspective. There are important lessons that we can learn from the previous pandemic. At the same time, the next pandemic will no doubt be different and society itself will also have changed. Thorough preparation calls for action in multiple fields: legislation, policy, implementation, knowledge and advice. While addressing all these aspects in the present advisory document, the main focus of the MIT in this publication is on building a solid societal impact knowledge base and on using an assessment framework that will guarantee a balanced decision-making process. During the COVID-19 pandemic there was no proper balance between medical versus societal knowledge and advice. If we are to ensure balanced decision-making during another pandemic, we need more knowledge about societal impacts.

- Pandemische paraatheid op maatschappelijk terrein [Pandemic preparedness in the societal sphere] (Letter of the MIT to the informateur) | Letter | Rijksoverheid.nl
- In this advisory document, the term 'societal impact' is understood to refer to both the societal and economic effects of the pandemic and the measures taken to control it. Despite the fact that some of the effects of the pandemic measures proved to be positive (e.g. as regards working from home), in most cases 'societal impact' concerns negative effects.
- These parties include the Societal Impact Team | Rijksoverheid.nl; Advisory letters of the Netherlands Institute for Social Research (SCP) on the societal effects of COVID-19 | SCP; Coronavirus | Netherlands Institute for Human Rights; Overview of recommendations, consultations and blogs on the COVID-19 pandemic | Council for Public Health & Society; Behavioural sciences during the COVID-19 pandemic | RIVM; COVID-19 pandemic | CPB
- Presentation by the chair of the MIT, technical briefing 9 May 2023 | Rijksoverheid.nl; Presentation by the chair of the MIT, technical briefing 13 December 2022 | Rijksoverheid.nl
- Quarterly survey among adults, measurement 3: Uitgestelde zorg [Postponed care] | RIVM; Corona kost 320.000 gezonde levensjaren door uitgestelde operaties [Operations postponed due to pandemic result in 320,000 healthy life years lost] | RIVM
- Invloed van de corona-epidemie op de gezondheid en leefstijl van Nederlandse volwassenen [The influence of the COVID-19 pandemic on the health and lifestyle of adults in the Netherlands] | RIVM; Mentale gezondheid en corona [Mental health and COVID-19] | RIVM
- Coronascepsis in Nederland [Scepticism about COVID-19 in the Netherlands] | SCP; Sceptische visies in het coronadebat [Sceptical views in the debate about COVID-19] | SCP
- Leervertragingen en zorgen over welzijn door corona [Delays in education and concerns over welfare due to COVID-19] | Rijksoverheid.nl
- Jongeren: door coronaperiode belangrijk deel van mijn leven gemist [COVID-19 pandemic made me miss out on a key stage of my life, young people claim] | RIVM
- Advies maatschappelijke gevolgen van long covid [Advisory on the consequences of long COVID for society] | Societal Impact Team
- Beweging, voeding en corona [Exercise, nutrition and COVID-19] | CBS
- Leefstijl en oversterfte tijdens de covid-19-pandemie [Lifestyle and excess mortality during the COVID-19 pandemic] | SEO Amsterdam Economics
- De doorwerking van de coronapandemie op sociale cohesie [The impact of the COVID-19 pandemic on social cohesion] | ZonMw; SCP study: Onderzoek SCP: Belangrijk dat de overheid met sceptische burgers in gesprek blijft [SCP study: It is important for the government to maintain its dialogue with sceptical citizens] | SCP

2.2 The MIT on standby

The government has decided to put the MIT on standby effective 1 September 2024.¹⁴ This decision was based in part on an external evaluation. 15 The government argues that as long as there is no pandemic, the need for an active committee is less urgent. The potential added value of the MIT, according to the government, lies primarily in its ability to provide urgent advice during a pandemic. At the same time, the government believes it is important that the lessons learnt from the previous pandemic should not be forgotten and that we build up a solid knowledge base, so that the MIT can take up its duties with greater preparedness when a new pandemic unfolds.

The MIT is pleased with the level of appreciation expressed in the external evaluation report and the government's decision.¹⁶ In response to the third report of the Dutch Safety Board (OVV) into the management of the COVID-19 crisis¹⁷, the government previously confirmed the importance of an independent authority for information and advice on societal impact. 18 According to the evaluation, there is a broad level of support for the function of the MIT. The MIT has demonstrated its (potential) added value, despite the breadth and complexity of its mandate and the limited means at its disposal. The report states that effective processes and methods have been established, leading to high-quality recommendations for the government and parliament - methods that, according to MIT, can also be used in other disruptive crises. The report commends the MIT for bringing together various perspectives in its advice that had previously been underrepresented and/or not sufficiently considered. According to the final report, the MIT's recommendations have had a visible impact on decision-making by the government and parliament, which always supported the substance of those recommendations and repeatedly followed up on them in concrete decisions and guidance. The conclusion is that the MIT's recommendations have resulted in more balanced guidance on pandemics and pandemic measures from a socio-economic perspective.

The Societal Impact Team (MIT) was established on 1 September 2022, towards the end of the COVID-19 pandemic, to advise the government and parliament on the socio-economic consequences of pandemics and pandemic measures.¹⁹ The client of the MIT is the Secretary-General of the Ministry of Social Affairs and Employment. The MIT's advisory role aligns with the government's goals for the long-term management of the COVID-19 pandemic. Those goals express the government's view that during a pandemic, socio-economic activities should be allowed to continue as much as possible and the chain of healthcare services should remain accessible for all.²⁰ The MIT provides solicited and unsolicited advice on the basis of the knowledge and information available from science and practice. Over the period up until 1 July, the MIT has provided several solicited and unsolicited recommendations²¹ and implemented the priorities from the 2022-2024 work programme.²² This has resulted in the recommendations on the knowledge base in this advisory document and the development of the assessment framework (separate appendix).

Kamerbrief over kabinetsreactie op evaluatierapport Maatschappelijk Impact Team [Letter to Parliament on the government's response to the Societal Impact Team evaluation report] | Parliamentary Paper | Rijksoverheid.nl

Evaluatie Maatschappelijk Impact Team (MIT) [Evaluation of the Societal Impact Team (MIT)] | Parliamentary Paper | Rijksoverheid.nl

Copy of letter with MIT response to final evaluation report | Parliamentary Paper | Rijksoverheid.nl

^{17.} Response to COVID-19 crisis - Part 3 (onderzoeksraad.nl)

 $[\]underline{Infectieziek tebestrijding\ [Infectious\ disease\ control]\ |\ House\ of\ Representatives\ of\ the\ States\ General\ Control Contr$

¹⁹Instelling Maatschappelijk Impact Team [Establishment of the Societal Impact Team (MIT)] | Parliamentary Paper | Rijksoverheid.nl19

Letter to Parliament with detailed plans for the long-term response to COVID-19 | Parliamentary Paper | Rijksoverheid.nl

^{21.} $\underline{\mathsf{Maatschappelijk}}\,\mathsf{Impact}\,\mathsf{Team}\,[\mathsf{Societal}\,\mathsf{Impact}\,\mathsf{Team}]\,|\,\mathsf{Ministry}\,\mathsf{of}\,\mathsf{Social}\,\mathsf{Affairs}\,\mathsf{and}\,\mathsf{Employment}\,|\,\mathsf{Rijksoverheid.nl}\,$

Werkprogramma MIT 2022-2024 [MIT work programme for 2022-2024] | Annual plan | Rijksoverheid.nl

2.3 Explanation

This advisory document originates from the work programme for 2022-2024²³ and was announced in the letter to the informateur²⁴, the MIT's response to the external evaluation²⁵ and the advice on the review of the Public Health Act, 'Recht doen aan impact en waarden' (Doing justice to impacts and values).26 See the footnotes for references to the relevant literature. In addition, discussions and meetings have been held that have resulted in recommendations on the knowledge base and the development of the assessment framework.

To build the knowledge base on socio-economic impact, the Netherlands Institute for Social Research (SCP) indicated its wish to perform a coordinating role, in collaboration with the other planning agencies and relevant knowledge institutions. In the run-up to this advice, the MIT, together with SCP, conducted a preliminary survey to explore the extent to which knowledge institutions were able and willing to play a role in the development of the knowledge base. These knowledge partners have joined the MIT in developing the recommendations in this advisory report in an atmosphere of constructive and critical collaboration.

For the purpose of developing the assessment framework, the MIT organised a session with experts to discuss the instrument as such, as well as a practice session in which the framework was tested successfully. The two sessions helped to further finetune the assessment framework. In addition, a separate experts' session and validation session were organised in which the participants considered themes and indicators that make it possible to measure the societal impact of pandemics and pandemic measures. The team also consulted experts on the process that will enable a further selection of indicators in the event of a new crisis. This produced an initial selection of 'signal indicators', i.e. indicators that are the most sensitive to changes in society during a pandemic. Consultants of Van de Bunt consultancy provided guidance during the development of the assessment framework and helped the MIT finetune its reasoning.

Finally, the draft advisory report was submitted to a number of experts for a peer review. For a list of persons and organisations consulted, see the appendix. The MIT would like to thank all these parties for their contributions.

2.4 Reader's guide

In this advisory document, the MIT presents a number of recommendations on the steps to be taken to ensure the required level of societal preparedness in the event of a pandemic. The MIT's recommendations concern:

- building a knowledge base about societal impact in times of calm and during a crisis (3.1);
- using an assessment framework to ensure more balanced advisory and decision-making processes (3.2);
- the statutory framework and the national and international policy frameworks to safeguard attention for societal impact (3.3), and
- the legal provisions for and organisational integration of the MIT on standby (3.4).

Werkprogramma MIT 2022-2024 [MIT work programme for 2022-2024] | Annual plan | Rijksoverheid.nl

Pandemische paraatheid op maatschappelijk terrein [Pandemic preparedness in the societal sphere] (Letter of the MIT to the informateur) | Letter | Rijksoverheid.nl

^{25.} MIT response to final evaluation report | Letter | Rijksoverheid.nl

Advice on the Public Health Act: Recht doen aan impact en waarden [Doing justice to impacts and values] | Report | Rijksoverheid.nl

3. Advice on pandemic preparedness on societal level

3.1 Recommendations concerning the knowledge base on societal impact

During the COVID-19 pandemic, the available knowledge about socio-economic impacts was fragmented and much of it was not up to date. The available knowledge could not always be translated into perspectives for action by policymakers and administrators. In the past, rapid and scalable socio-economic data, knowledge of societal mechanisms and useful statistical models to assess societal impacts in the short and longer term were scarcely available. Because of the imbalance between the available societal knowledge and pandemic knowledge, these two domains were not always equally represented in decisions made during the COVID-19 crisis.

To minimise or mitigate the societal damage from a pandemic and pandemic measures in the future, we need more knowledge about how pandemics and pandemic measures affect society and how mitigating actions can alleviate that impact. Additionally, there is a need for more insight into the societal image – how society is doing from a socio-economic viewpoint – and for explanations and forecasts regarding developments in society and the impact of measures taken during a pandemic. Only if these knowledge gaps are filled will it be possible for the MIT to better substantiate its recommendations and guarantee balanced decision-making in the future.

The MIT strives to provide solid justification for all its recommendations, based on evidence from science and the field. To ensure effective management of future pandemics, this substantiation will have to be improved so as to ensure more balanced decision-making by the government. The lack of current information is not inherent to the socio-economic sciences, but rather a consequence of policy choices. The research conducted by the RIVM Behavioural Unit (funded by the Ministry of Health, Welfare and Sport during the COVID-19 pandemic) on support for and compliance with COVID-19 measures demonstrates that it is indeed possible to generate data and produce recommendations in a short period of time. Through a representative panel survey and an explanatory cohort study, the Behavioural Unit performed 59 measurements, interviewed hundreds of citizens and sector representatives and conducted scenario and intervention studies.²⁷ It translated all these data into 30 recommendations on pandemic measures within the same brief time frame as did the Outbreak Management Team (6 to 72 hours). 28 Additionally, the unit produced more than a hundred knowledge updates, memorandums, interpretation sessions and training courses for policymakers and communication professionals. The MIT also believes it is possible to develop forecast models on socio-economic themes – with similar levels of certainty/uncertainty as forecasts in medical science.

As an advisory committee, the MIT itself has no research or knowledge development tasks. For each request for advice, however, the MIT does conduct a targeted knowledge synthesis to ensure proper substantiation of its recommendations. In the preliminary memorandum and the work programme for 2022-2024, the MIT already emphasised the importance of a solid knowledge base on societal impact, built in consultation with its own expert members and other knowledge partners.²⁹ The MIT recommends building up a future-proof, structural knowledge base on societal impact during the next few years, with due regard for the need for balanced advice and decision-making on future pandemics. Such a knowledge base needs a solid design, firm coordination and clear process agreements between all the knowledge partners involved. A period of calm is the perfect moment to create such a knowledge base. Together, the knowledge partners can build an accessible and comprehensive information and data infrastructure on societal impact, ensure scaling opportunities in the event of a pandemic using appropriate data collection methods, and provide annual updates of the knowledge infrastructure. There is a need for a strong and stable network of parties that are able to provide knowledge, and for a central coordination centre that maintains the network,

Analyses of previous measurements: Naleving van en draagvlak voor de basis gedragsregels [Compliance with and support for basic rules of behaviour] | RIVM; Resultaten onderzoek gedragsregels en welbevinden [Results of study into behavioural rules and welfare] | RIVM

Publicaties Corona Gedragsunit [Publications of the COVID-19 Behavioural Unit] | RIVM

Werkprogramma MIT 2022-2024 [MIT work programme for 2022-2024] | Annual plan | Rijksoverheid.nl; Startnotitie Maatschappelijk Impact Team [Preliminary memorandum of the Societal Impact Team] | Parliamentary Paper | Rijksoverheid.nl

collects the available knowledge, performs knowledge syntheses and organises periodic practice sessions. The MIT's advice is to ensure that the Netherlands Institute for Social Research (SCP), as the coordinating party, be given the resources it needs to build the required knowledge base in the coming years, in collaboration with the other knowledge partners including planning agencies, the Netherlands Institute for Public Health and the Environment³⁰, Statistics Netherlands, the Royal Netherlands Academy of Arts and Sciences and the Dutch National Bank. Below are a number of specific recommendations to that effect.

3.1.1 Invest in explanatory studies and forecast models

The ability to produce estimates based on socio-economic indicators and to explain socio-economic impacts and developments caused by pandemics and pandemic measures is less developed than the ability to produce estimates and explain epidemiological developments. This is why the MIT expressly advises the government to invest in scientific studies that will help to reduce this knowledge deficit. To that end, the MIT recommends that SCP be commissioned to set up a research programme in collaboration with the other planning agencies. The ability to forecast socio-economic developments and societal impact will help to strengthen the justification of measures during a future pandemic.

Additionally, the MIT recommends that a study be carried out into the role of values during pandemics and in their management. For this purpose, we need to gain insight into the values that the public hold most dear, both in quiet times – for example, through scenarios – and during a crisis. Moreover, in preparation for a crisis there is a need to study preferences among the population for specific measures, with due regard for the pandemic and social context.

3.1.2 Invest in the availability of rapid and well-substantiated information

During a pandemic, up-to-date and reliable data are essential: data on society in general and, more particularly, on the specific groups, sectors or regions under pressure. For example, those data may concern the level of compliance with and support for (restrictive) measures, as well as public health and healthcare, subsistence issues and public trust in the government. Some of those data could serve as input for a societal dashboard that provides quick insights into relevant societal developments during a pandemic. Another part of the data can be used to determine and estimate the societal impact of pandemic measures, serving as a basis for advice.

The desired data are not yet sufficiently available. Strategies to obtain access to up-to-date data during a pandemic include quick access to register data from Statistics Netherlands, the use of real-time data provided by third parties (such as DNB for payment traffic data) and the use of a new or existing, high-quality online panel. Such a panel should be demographically representative and scalable to generate additional information about specific groups, sectors or regions that are seriously affected during the pandemic.31

In the Assessment Framework for Pandemics (separate appendix), the MIT has included a set of themes and indicators – based on the concept of general welfare – that are relevant for determining the societal impact of pandemics and pandemic measures. In addition, the MIT recommends the development of a societal dashboard with signal indicators. The purpose of such a dashboard is to generate relevant and targeted insights into societal developments during, or in the phase leading up to, a pandemic. Functioning as an early warning system, signal indicators identify early-stage developments within a specific domain and allow for relatively easy and rapid measurement. Both subjective perception indicators and objective behaviour indicators can be used for this purpose. The MIT recommends that a dashboard be created for the social domain, the economic domain and health domain, as a minimum. In the Assessment Framework for Pandemics (separate appendix), the MIT has included an initial proposal to that effect, based on consensus among experts.

RIVM has ensured a central position for behavioural sciences in the Pandemic Preparedness Plan of action | RIVM and, in turn, is partnering with NIVEL, ARQ and GGD GHOR in a covenant for research into welfare and health during crises: stcrt-2022-10637.pdf (officielebekendmakingen.nl)

www.impactcorona.nl/wp-content/uploads/2021/11/Covid_WP977.pdf

3.1.3 Conduct an annual, systematic knowledge synthesis

To ensure that the knowledge base on the societal impact of pandemics, pandemic measures and mitigating measures remains up to date and available, the MIT recommends that the government commission an annual knowledge synthesis. In many countries, including the Netherlands, research data and new research programmes are becoming available that provide more insight into the societal impact of the COVID-19 pandemic and the associated measures.³² Research into the resilience and robustness of society in relation to crises will also receive a boost in the coming period.³³ The MIT sees considerable added value in the collection, validation and dissemination of research results in this field. So far, however, few synthesis reports have been published.³⁴ The upcoming period should be used to systematically visualise the knowledge about societal impacts, possibly as part of a coordinated international effort (see also 3.3.3). A knowledge synthesis gathers information and makes results available that can be used as input for annual practice sessions (see 3.2.1) and for the response to a future pandemic.

Ideally speaking, the available knowledge should be developed into a catalogue with information about the societal impact of pandemic measures and a toolbox with mitigating measures. In times of crisis, this will help to rapidly identify the positive and negative consequences of specific measures in specific contexts. The effective use of the assessment framework strongly depends on the availability of such a catalogue of measures and toolbox (3.2).

3.1.4 Maintain a network of scientists and field experts

The MIT has built up a network of scientists and field experts that needs to remain up to date and should also be extended, in collaboration with the Royal Netherlands Academy of Arts and Sciences and others. For the MIT, the network serves as a flexible pool of expertise, knowledge and experience regarding the societal image, the societal impact of the pandemic and pandemic measures, and the use of mitigating measures. Effective maintenance of this network is crucial to strengthening the pandemic preparedness of science and civil society and ensuring quick access to the available knowledge and experience in future crisis situations. Preferably, the network should be involved in the development of the knowledge base, with experts and stakeholders from the network participating in meetings and practice sessions (3.2.1).

The MIT wishes to emphasise the importance of knowledge from the field, as well as scientific knowledge, for advice in times of crisis. Industry associations can quickly provide insights into the state of affairs in their sector; professional organisations capture signals from professionals; occupational health services have up-to-date data on absenteeism; membership organisations have knowledge about specific groups; private parties such as banks, transport companies and supermarkets have real-time data available that can be valuable during a crisis. Many of those organisations maintain direct or indirect contacts with their members and are quick to pick up signals from the field. Of course, organisations in the field also represent interests, but this does not diminish their - sometimes unique - knowledge and experience. Moreover, this link with the field will ensure permanent insight into bottlenecks in implementation and enforcement, the level of support for pandemic measures and the scope for mitigating measures. Such practical insights, after careful elimination of the interests of the parties that provide them, will improve the quality of the recommendations.

3.1.5 Centralise the coordination of the knowledge base

Knowledge of the societal image and the societal impact of pandemic measures covers a wide spectrum and is not available within a single knowledge institute. It is crucially important, therefore, to centralise coordination of the knowledge base. In this context, the MIT's advice is to assign coordination to SCP, given its socio-economic expertise. As regards economic knowledge, knowledge about the social environment, the supply of data and scientific knowledge about explanatory mechanisms, SCP will have to collaborate with the other planning agencies, Statistics Netherlands, other knowledge institutes and universities. As regards knowledge about the level of support, welfare and public health, the SCP should seek alignment with RIVM.

Among other things, Knowledge on the effects of measures during the COVID-19 pandemic (zonmw.nl); BEhavioural and social sciences and pandemic PREPAREDness (zonmw.nl)

Among other things, Adapt! - Security in Open Societies (SOS) - Universiteit Utrecht (uu.nl)

Among other things, With the Knowledge of the Future. Science Well Prepared for Pandemics - KNAW; Learning from a Crisis - Convergence

The first exploratory efforts towards knowledge building have already been made. The MIT's advice is to ask SCP to continue those exploratory efforts in line with the above recommendations. As regards implementation, the MIT recommends that SCP, in its coordinating role, enter into collaborative agreements with key knowledge partners. Since this will result in an extension of SCP's tasks, the MIT recommends that the SCP budget be raised accordingly.

3.2 Recommendations for the assessment framework for pandemics

During a future pandemic, the MIT recommends using an assessment framework that will clearly identify the pros and cons of implementing or refraining from specific pandemic measures.³⁵ Such a balanced assessment was lacking during the COVID-19 pandemic. Several international examples examined by the MIT warrant the conclusion that the use of such an assessment framework by the government clearly offers added value. During a pandemic, dilemmas and difficult choices are inevitable. However, by ensuring a well-substantiated, explicit and transparent assessment of those dilemmas and choices, the decisions made during a pandemic will become more understandable, verifiable and acceptable to society. Transparency increases the degree of procedural justice as perceived by citizens, which, in turn, contributes to public trust in the government.

In times of crisis there is a need for clear scenarios and processes. This applies both to the response to the pandemic and to the efforts to map out, prevent or mitigate the societal consequences of the pandemic and pandemic measures. The MIT has invested in the development of an assessment framework that serves as a contextual tool for taking measures during a pandemic. The use of such an assessment framework contributes to structured and transparent advice and decision-making on pandemic measures and mitigating measures. The assessment framework can be used to examine the impact on relevant socio-economic themes, as well as how that impact is distributed among specific groups, sectors or regions. The assessment also takes fundamental rights and societal values into account. The assessment framework for pandemics is attached to this advisory document as a separate appendix.

3.2.1 Practise with the assessment framework every year and ensure its continued development

The assessment framework needs periodic maintenance and adjustment. In addition, it requires practice to use the assessment framework quickly and effectively. The MIT recommends that the assessment framework be reviewed and adjusted regularly. Adjustments are required to incorporate new information and new scientific insights, or new experiences gained in simulations.³⁶ The assessment framework will also have to be adapted in response to possible shifts in governance during pandemics and crises, and to the associated changes in the roles of the key players concerned. The roles of key organisations in pandemic response are described in the National Crisis Plan for Infectious Disease Control (3.3.2).

It is important to ensure that advisors in times of crisis - the OMT and MIT - and the network of scientists and field experts retain their pandemic preparedness. To that end, the MIT advises the government to organise annual practice sessions. This will help to maintain the required level of focus among the parties involved and provides a clear structure for gathering all relevant knowledge and experience. These sessions provide opportunities to practise with the assessment framework in realistic scenarios, highlighting the extent to which the framework aligns with changes in society, new scientific insights and the current need for advice. The knowledge synthesis can also be used for the practice sessions (3.1.3). Additionally, the sessions are important for testing the structure of the knowledge base in terms of its practical value for advice, by showing the extent to which knowledge about the societal impact of pandemics, which is currently fragmented among a large number of knowledge institutes, can be gathered quickly and efficiently (3.1.2).

MIT advice 'Fit voor het najaar' [Fit for autumn] | Parliamentary Paper | Rijksoverheid.nl

The PDPC (Pandemic and Disaster Preparedness Center) studies integral assessment frameworks in an international context. In connection with the research programme on the effects of COVID-19 measures, ZonMw (the Netherlands Organisation for Health Research and Development) is considering setting up a research programme on assessment frameworks. Effecten van COVID-19 maatregelen: wat hebben we geleerd? [Effects of COVID-19 measures: what have we learned?] | ZonMw

3.2.2 Strive for collaboration and integrated advice

The current structure of the assessment framework reflects two separate columns: an OMT column and an MIT column. However, the framework is actually very suitable for an integrated assessment of advice on infectious disease control (OMT) and societal consequences (MIT). There is an evident need for interaction between these two columns: information exchange, alignment, collaboration and possibly also integrated advice. The MIT advises the government to promote such interaction and also promote practice with integrated advice. Integrated advice is still in its infancy in the Netherlands, and is currently being explored in an effort coordinated by the Pandemic and Disaster Preparedness Center (PDPC).³⁷ The first experiments during PDPC sessions in April and May 2024 have shown that integrated advice from medical and societal experts is perfectly feasible. Participants in the sessions were more enthusiastic about the integrated advice than about the sum of the two separate advisory processes. Experts valued the sharing of information and collaborated to find the best options for addressing the pandemic: effective pandemic measures with minimal negative impact, and mitigating measures to compensate for negative effects.

The follow-up to this challenging route may also incorporate good examples from abroad (3.3.3).³⁸ Likewise, in the practice sessions of the MIT on standby (3.2.1) there is a preference for integrated advice.

3.2.3 Make sure that knowledge gaps are filled

Thanks to the development of and practice sessions with the assessment framework, the MIT has been able to identify major knowledge gaps. What knowledge is required for a well-substantiated assessment? The identified knowledge gaps in the assessment framework highlight the importance of developing and strengthening the knowledge base in the context of pandemic preparedness (3.1). Among other things, the assessment framework has revealed a need for a social conditions dashboard with signal indicators on the state of affairs in society during a pandemic; for rapid data to ensure the societal image remains up to date; for statistical models that enable socio-economic forecasts and estimates of the societal impact of measures; for preference surveys among the population and for knowledge on pandemic measures and mitigating measures. The assessment framework (see the separate appendix) highlights the knowledge gaps to be further addressed.

3.2.4 Centralise the continued development of the assessment framework

Just like the knowledge base, the assessment framework needs an 'owner' who will be able to secure its further development. The MIT recommends that, as in the case of the knowledge base, that role be assigned to SCP.

3.3 Recommendations regarding legislation and frameworks

The recommendations in this advisory document primarily concern the creation of a knowledge base on societal impact (3.1) and the use of an assessment framework for pandemics (3.2). It is also important, however, to secure a focus on societal impact in regulatory frameworks and in the relevant national and international policies. These regulatory and policy frameworks should ensure a transparent, well-substantiated and balanced assessment of pandemic measures – and their societal impact – and mitigating measures during an actual pandemic.

The integrality of decision-making and parliamentary involvement are among the key focus areas of a regulatory framework. A crisis plan should provide a clear overview of roles and processes during a pandemic. Finally, the international context also plays a very important role during a pandemic.

Leren van een Crisis [Learning from a crisis] | Pandemic and Disaster Preparedness Center

 $Ethis che principes in een afwegingskader voor pandemiemaatregelen \cite [Ethical principles in an assessment framework for pandemic measures] \cite [Report | Rijks overheid.nl] and the principles in an assessment framework for pandemic measures] \cite [Report | Rijks overheid.nl] and the principles in an assessment framework for pandemic measures] \cite [Report | Rijks overheid.nl] and the principles in an assessment framework for pandemic measures] \cite [Report | Rijks overheid.nl] and the principles in an assessment framework for pandemic measures] \cite [Report | Rijks overheid.nl] and the principles in an assessment framework for pandemic measures] \cite [Report | Rijks overheid.nl] and the principles in an assessment framework for pandemic measures] \cite [Report | Rijks overheid.nl] and the principles in an assessment framework for pandemic measures] \cite [Report | Rijks overheid.nl] and the principles in an assessment framework for pandemic measures] \cite [Report | Rijks overheid.nl] and the principles in an assessment framework for pandemic measures] \cite [Report | Rijks overheid.nl] and the principles in an assessment framework for pandemic measures] \cite [Report | Rijks overheid.nl] and the principles in an assessment framework for pandemic measures] \cite [Report | Rijks overheid.nl] and the principles in an assessment framework for pandemic measures are the principles in an assessment framework for pandemic measures are the principles in an assessment framework for pandemic measures are the principles in a particular framework fra$

3.3.1 Design a regulatory framework that recognises the impact and values at play during a pandemic

Effective preparedness for the next pandemic calls for a future-proof and balanced regulatory framework for pandemic control that takes societal impacts and values into account. The current Public Health Act does not provide sufficient safeguards in this respect. This is why the MIT, the Council for Public Health & Society (RVS) and the Netherlands Institute for Human Rights (Institute) have issued a joint advice on the amendments to the Public Health Act required to ensure proper recognition of societal and human rights related impacts.³⁹

It is impossible to determine in advance what measures will be required for the next pandemic, because the characteristics of that pandemic may be totally different from the previous one. Neither is it possible to anticipate the societal impact of the measures required for the next pandemic. For this reason, the MIT, RVS and the Institute advise the government not to include specific measures in the regulatory framework, but instead to combine general principles as a basis for measures with firm procedures to secure a focus on societal impact. The advice also describes ways in which the assessment framework can be used in addressing a pandemic (3.2).

The advice of the MIT, RVS and the Institute includes the following specific recommendations:

- Ensure a comprehensive assessment of proportionality. The more severe a measure, the more urgent it is to assess its proportionality.
- Include a structure for phased governance in the Public Health Act, allowing for rapid decision-making in the acute phase of a pandemic but taking greater account of societal impact and providing room for debate with parliament and society at large in the control phase and aftermath phase.
- In the Public Health Act, include provisions on independent advice on pandemic measures and their consequences for society and human rights.
- Include provisions on integrated decision-making by the government. All government ministries whose domains are affected by pandemic measures must be involved in the preparation and decision-making processes.
- Ensure transparency in decision-making on pandemic measures. When implementing pandemic measures, the authorities should ensure transparent communication on the underlying considerations and the associated pros and cons.
- Include legal provisions to strengthen the involvement of parliament. Both the Senate and the House of Representatives should be involved more closely in the debate and decision-making process, especially during the later phases of a pandemic.
- Provide more legal opportunities for differentiation between regions and groups. This means that it should be possible to differentiate the response according to region and to create more opportunities for exceptions for specific groups.

3.3.2 Secure integrated assessment in the National Crisis Plan for Infectious Disease Control.

Under the leadership of the Minister of Health, Welfare and Sport and the Minister of Justice and Security, work is under way on a National Crisis Plan for Infectious Disease Control (LCP-I). National crisis plans are intended to cover the most significant risks in society, as determined within the Government-wide Analysis of National Security Risks. 40 This also covers the risk of pandemics. In other fields, too, national crisis are in place or are being drawn up, under the coordination of the National Coordinator for Security and Counterterrorism (NCTV).41

The LCP-I includes a description of the national crisis structure, which primarily concerns the acute governance phase of a pandemic. The crisis plan is an important source of guidance during the outbreak of a pandemic: in outline, it describes the decision-making process for a next pandemic crisis, at the national level and in collaboration with regional and sectoral stakeholders.

^{39.} Advice on the Public Health Act: Recht doen aan impact en waarden [Doing justice to impacts and values]' | Report | Rijksoverheid.nl39. At the time of writing, the government has not yet taken a position on the advice.

Rijksbrede Risicoanalyse Nationale Veiligheid [Government-wide Analysis of National Security Risks] | Report | National Coordinator for Security and Counterterrorism (nctv.nl)

National Crisis Plans | National Coordinator for Security and Counterterrorism (nctv.nl)

The MIT recommends that there should be a clear focus on societal impact not only in the regulatory framework but also in the National Crisis Plan for Infectious Disease Control. The recommendations on the Public Health Act can also be incorporated into the LCP-I, especially as regards the proportionality assessment, independent advice, integrated and transparent decision-making, parliamentary involvement and the relationship between national and regional authorities (see 3.3.1).

3.3.3 Ensure a clear focus on societal impact in international agreements

Pandemics are inherently international or indeed global in nature. This makes it crucial to also consider the international context and ensure involvement from the Netherlands in international agreements on pandemic preparedness. The focus in most international agreements is on controlling infectious diseases. Even so, attention for the need to also consider societal impacts appears to be growing. The MIT advises the government to provide an extra impulse, from the Netherlands, for societal impact in an international context and to learn from good examples abroad.

World Health Organization

The member states of the World Health Organization (WHO) are currently drafting a pandemic agreement.⁴² The negotiations on this agreement began in 2021 and focus on the worldwide response to, prevention of and preparedness for future pandemics.⁴³ In May 2024, the member states decided to continue the negotiations and agreed that they should be finalised within one year.⁴⁴

In addition to covering infectious disease control, the draft pandemic agreement also includes clear references to a broader societal framework. For example, the draft contains⁴⁵:

- an article recognising that a range of dimensions (environment, climatic, social, anthropogenic and economic factors) increase the risk of pandemics and should be taken into consideration in relevant policies and measures (Article 4(2bis));
- attention for the need to develop and strengthen signalling data (Article 6(3-4));
- an explicit emphasis on the need to stimulate the use of social and behavioural sciences for pandemic prevention, preparedness and response (Article 6(2(d)));
- encouragement of the signatories to adopt whole-of-society and whole-of-government approaches for pandemic prevention, preparedness and response (Article 217(1));
- the instruction that each signatory should promote the effective and meaningful engagement of multiple communities in pandemic prevention, preparedness and response (Article 17(3(a)));
- an article stating that the signatories shall take appropriate measures to mitigate the socio-economic impact of pandemics and strengthen their social policies in order to facilitate a rapid, inclusive and resilient response to pandemics (Article 17(3(b)));
- an article stating that researchers shall inform policymakers on health and social measures, compliance with those measures and trust in science and public institutions (Article 18(2)).

Proposal for the WHO Pandemic Agreement

www.who.int/news/item/20-03-2024-call-for-urgent-agreement-on-international-deal-to-prepare-for-and-prevent-future-pandemics

www.consilium.europa.eu/en/infographics/towards-an-international-treaty-on-pandemics/

Revised draft of the negotiating text of the WHO Pandemic Agreement At World Health Assembly, countries agree on efforts to boost pandemic preparedness | UN News

European Union

The European Union has adopted a regulation which is aimed at supporting and safeguarding the pandemic preparedness of the EU and its Member States.⁴⁶ Member States are required to report to the European Commission on national-level (and regional-level, if applicable) efforts to ensure prevention, preparedness and response to cross-border health risks. However, the monitoring and information exchange in Article 5(3)(b) focus primarily on health statistics and have no interdisciplinary framework.

Additionally, the EU has a European Centre for Disease Prevention and Control (ECDC)⁴⁷ and a Health Emergency Preparedness and Response Authority (HERA)⁴⁸. These two organisations provide information on preparedness for health crises by disseminating research results and issuing recommendations. For example, the ECDC recently emphasised that data should be collected in multiple domains rather than health alone, that the wider societal impact should be taken into consideration and that advice and decisions should incorporate expertise from a range of relevant fields. 49

Within the research sector, parties share knowledge at the European level on pandemic preparedness and lessons learnt. For example, in 2021, a network of seven major European multidisciplinary research organisations⁵⁰ published a paper on the lessons to be learnt from the COVID-19 pandemic in view of future pandemics.⁵¹ One of those lessons concerns strengthened and more efficient monitoring (at the European level, and for the long term), including the need for a multidisciplinary approach.

Neighbouring countries, too, are examining their levels of pandemic preparedness. One interesting example is Belgium. In the Generic preparedness plan, published in 2023, preparedness is viewed as an aspect that requires constant attention. For instance, to cover the multidisciplinary perspective Belgium has the Strategic Scientific Committee (SSC), whose function is comparable to that of the MIT.

Additionally, the Working Group Societal Impact Crises is tasked with building a knowledge base in conjunction with a range of parties. This working group seeks to bring together representatives from various federal departments/ ministries, including Statbel, the National Bank and the Federal Planning Bureau. This collaboration is continuing in order to also provide an up-to-date picture during a non-pandemic phase, for example in the form of a quarterly monitoring report on employment and social protection in Belgium. Additionally, during the pandemic there was an Economic Risk Management Group, a socio-economic unit (ECOSOC) and a taskforce for vulnerable groups. 52 Within the context of collaborative research, since the pandemic there has been a COVID-19 Research Consortium for Income Distribution and Societal Effects, a partnership of three university research groups.

Regulation (EU) 2022/2371

Homepage | European Centre for Disease Prevention and Control (europa.eu)

Health Emergency Preparedness and Response (HERA) - European Commission (europa.eu)

 $[\]underline{www.ecdc.europa.eu/en/publications-data/public-health-and-social-measures-health-emergencies-and-pandemics}$

de Consiglio Nazionale delle Ricerche, Centre National de la Recherche Scientifique, Consejo Superior de Investigaciones Científicas, HelmholtzGemeinschaft $Deutscher Forschungszentren, Leibniz-Gemeinschaft \ and \ the \ MaxPlanck-Gesellschaft. \ \underline{https://sciencebusiness.net/network-updates/g6-group-research-funders-particles.}$ back-stick-science-campaign

www.cnrs.fr/sites/default/files/download-file/COVID-19%20Lessons%20Learned_2021%5B1%5D.pdf

social security. belgium. be/sites/default/files/content/docs/nl/publicaties/btsz/2020/btsz-2020-1-monitoring-en-beheer-van-de-sociaal economische-impact-van-de-sociaal econode-covid-19-crisis-in-belgie.pdf

3.4 Recommendations for the organisation of the MIT on standby

In order to be ready to provide advice during the next pandemic, it is important to consider the organisation of pandemic preparedness in society. The main tasks of the MIT on standby are to monitor the progress made in knowledge building (3.1) and the continued development of the assessment framework (3.2), to maintain the network with experts and professionals from the field (3.1.4) and to take the initiative to participate in practice sessions (3.2.1). A legal basis and organisational integration of the MIT are crucial to enable it to perform those tasks and scale up rapidly as required.

3.4.1 Provide a legal basis for advice on societal impact

Previously, the MIT, the RVS and the Institute recommended that advice on infectious disease control (OMT) and societal impact (MIT) during pandemics and pandemic measures be given a legal basis in the Public Health Act.⁵³ The independence and public nature of the recommendations must be legally enshrined in line with the Advisory Bodies Framework Act. Additionally, it is important to legally establish when and by whom the OMT and the MIT are to be activated to provide advice.

3.4.2 Provide a legal basis for and ensure the organisational integration of the MIT

In line with the effort to provide a legal basis for its advisory task (3.4.1) it is important for the MIT to be legally and organisationally integrated as an advisory committee. The most important condition regarding its legal basis is that the MIT can operate independently, also from the organisation where it is legally integrated. The MIT recommends exploring possibilities for integrating the MIT organisationally with SCP, near the knowledge base.

3.4.3 Retain a core team for the MIT on standby

The MIT is currently composed of scientists and professionals from the field with broad social or economic knowledge. This has proved quite effective and, according to the evaluation, has yielded good results. While on standby, the committee can be reduced to a core team of members and experts who retain their ties with the MIT by virtue of their position (on advisory councils and boards, in planning agencies, knowledge institutions), plus an independent chairperson. This core team could meet every six months. As soon as the MIT becomes operational, the core member team could then engage persons with the requisite supplementary expertise, depending on the expected societal impact.

3.4.4 Arrange a flexible type of support for the MIT

Over the past period, the MIT has been supported by a compact secretariat consisting of a secretary, several advisors and support staff. Substantively the secretariat was only accountable to the MIT. Such support will continue to be required for the MIT to perform its tasks while on standby, with operational management tasks (finance, HR, IT, communication etc.) being arranged through its organisational integration. This structure should be sufficiently flexible to enable a rapid scale-up of support and operational management in the event of a crisis.

Advice on the Public Health Act: Recht doen aan impact en waarden [Doing justice to impacts and values] | Report | Rijksoverheid.nl

4. Concluding discussion

The COVID-19 pandemic had, and still has, major consequences for our society. Since 1 September 2022, the Societal Impact Team has mapped out the societal consequences of the COVID-19 pandemic and formulated recommendations on the subject. The MIT was established in the aftermath of the COVID-19 pandemic, when the acute crisis was over. During the management phase of the pandemic, the MIT issued advice on pandemic response measures and the process of scaling them down. In the post-pandemic phase, the MIT also issued a recommendation on the societal consequences of long COVID, after which the priority shifted towards preparedness. However, we are now witnessing multiple lingering effects of the COVID-19 pandemic measures. For example, the impact on the mental welfare of young people, and on public trust in the government and politics, remains huge. These issues merit the ongoing attention of knowledge institutions and advisory boards, and call for compensatory policies by the government.

The assessment framework guides the MIT working methods, and was developed and tested in consultation with a wide range of experts, stakeholders and policymakers. One key lesson from the MIT practice session - and from PDPC practice sessions - is that collaboration between the OMT and the MIT is crucial. The assessment framework helps to improve information exchange, coordination and collaboration and should also result in integrated advice - as is already the case in a number of countries. Practising with integrated advice mechanisms is extremely useful, also as part of the nationwide practice sessions organised on the national government's instruction. Regulatory frameworks, policy frameworks and crisis plans should all be geared towards such an integrated approach. All the parties concerned - the government, advisors, experts, stakeholders and society as a whole - need to join forces in ensuring preparedness for the next pandemic.

There will be new pandemics in the future - the question is not whether this will happen, but when. And society will have to be prepared for other crises besides pandemics. Alongside infectious diseases, the National Security Risk Analysis has also identified climate and natural disasters, extremism and terrorism, threats to the democratic rule of law, military and economic threats, cyber threats and threats to critical infrastructure as risks that could cause societal disruption. Every disruptive crisis will have major societal consequences and undermine the resilience of individuals and of society at large. Every crisis response strategy should always involve careful considerations and decision-making. According to the MIT, the knowledge base on societal impacts and the assessment framework for pandemics are also suitable - or can be made suitable - for ensuring well-substantiated and balanced advice and decision-making during other types of crises. A knowledge base on societal impact ensures up-to-date and well-substantiated information on societal developments, and the assessment framework ensures a balanced response to a crisis and its consequences for individuals and society.

Finally, it is important never to lose sight of the international context of a pandemic or crisis. There is a lot that the Netherlands can learn from good examples abroad; conversely, the Netherlands may also become an inspiring example for other countries to follow. The MIT hopes that this will certainly be the case, to begin with, when it comes to pandemic preparedness on societal level.

Appendices

Appendix 1. List of consulted persons and bodies

The MIT wishes to express its gratitude to all those who have contributed to the advice on pandemic preparedness on societal level and the development of the assessment framework for pandemics (separate appendix). Without all these researchers, advisors, policymakers and practitioners, it would not have been possible to develop this advice and the decision-making framework.

Committees and advisory boards	
Netherlands Institute for Human Rights	Ms P. Cox Senior advisor
Centre for Ethics and Health (CEG)	Mr H. Ismaili M'Handi Vice-Chair
	Mr V. Rerimassie Advisor
	Ms M. Lenselink Coordinator
Council for Public Health & Society (RVS)	Ms M. de Lint Senior advisor

Science and research	
University of Groningen	Mr M. Dückers Professor by special appointment, Crises, Safety and Health
Delft University of Technology	Mr B. Kolen, also PDPC Director of Research and Development HKV
	Mr N. Mouter, also PDPC Director of Citizen Consultation
Erasmus University Rotterdam (EUR)	Ms P. Dykstra, also PDPC Professor of Sociology
	Mr W. Ebbers Professor of ICT and Strategic Innovation in the Public Sector
	Ms M. Koopmans, also PDPC Professor of Virology
	Mr R. van der Steen Professor by special appointment, Management and Organisation, also RVS
ODISSEI	Ms K. Karpinska Scientific Manager

Science and research		
VU Amsterdam	Mr H. Boutellier Endowed professor of Polarisation and Resilience	
	Mr M. Canoy Professor of Health Economics	
	Mr X. Koolman Professor of Health Economics	
Utrecht University	Mr J. Schippers Professor of Labour Economics	
	Mr M. Verweij Professor of Philosophical Ethics	
Pandemic and Disaster Preparedness Center	Ms J. de Boer Head of Education	
	Ms T. Cesuroglu Researcher	
	Ms A. Schreijer Director of Medical Affairs	
	Ms C. Waltz Postgraduate researcher	
Royal Netherlands Academy of Arts and Sciences (KNAW)	Ms M. Dogterom President	
	Mr M. Kromhout Senior advisor	
	Mr G. van der Starre Senior advisor	
Statistics Netherlands (CBS)	Ms A. Berg Director General	
	Mr R. van Gaalen Programme Coordinator for Demographics and Socio-Economic Studies	
	Mr E. Horlings Project Leader for the General Welfare Monitor	
	Mr A. de Jong Board advisor	
	Mr P. H. van Mulligen Chief economist	
	Mr H. Schmeets Researcher	

Science and research	
PBL Netherlands Environmental Assessment Agency	Mr A. van Lammeren Deputy Director
	Mr M. Thissen Senior economist
The Netherlands Institute for Social Research (SCP)	Mr J. Boelhouwer Programme Leader for General Welfare
	Ms P. Flore Methodologist
	Ms M. Goddijn Member of scientific staff
	Mr J. de Haan Senior member of scientific staff
	Ms R. Hoefman Member of scientific staff
	Mr J. Kappelhof Head of Methodology Department
	Ms M. de Klerk Senior member of scientific staff
	Ms J. van de Maat Member of scientific staff
	Mr M. Olsthoorn Programme leader for Participation, Talent Development and Equal Opportunities
	Ms K. van Ouwenhoven–van der Zee Director
	Mr S.R. Steijn Programme Leader for Nederland internationaal
	Mr S.B. Tunderman Member of scientific staff
	Ms M. de Voogd-Hamelink Member of research staff

Science and research	
CPB Netherlands Bureau for Economic Policy Analysis	Mr P. Hasekamp Director
	Mr B. Overvest Programme Leader COVID-19
	Mr S.H. Thewissen Programme Leader General Welfare
ZonMw	Mr C. Cucic Cluster Manager
	Ms Z. Ypma Programme Manager

Government	
ealth and Youth Care Inspectorate (IGJ)	Mr R. Westerhof Senior inspector
	Ms W. Verhave Coordinating specialist advisor
	Ms B. Winkel Team Coordinator, Infectious Diseases
ational Coordinator for Security nd Counterterrorism (NCTV)	Mr P. Henshuijs Senior policy officer
	Mr D. O'Floinn Head of the NCTV National Crisis Center
Ministry of Justice and Security	Mr P. Broersen Knowledge Consultant, Programme Board for Evaluation and Accountability COVID-19
	Ms M. Peen Knowledge Project Manager, Programme Board for Evaluation and Accountability COVID-19
Ministry of Social Affairs and Employment	Ms S. Pijper Policy officer
	Ms D. Sandee Coordinating policy officer
	Mr S. de Vries Economic policy officer
Ministry of Health, Welfare and Sport	Ms M. Volk Policy officer

Government	
National Institute for Public Health and the Environment (RIVM)	Ms M. Bink Head of Behaviour and Health Department
	Mr H. Brug Director-General
	Ms A. Dijk-Stroeve Head of Centre for Prevention, Lifestyle and Health
	Mr J. van Dissel Former Director of the Centre for Infectious Disease Control
	Ms S. Euser Programme Leader, Pandemic Preparedness
	Ms F. Kroese Behavioural scientist
	Ms L. Lanting Manager of Department for Medical Environmental Science, After-care and Security
	Mr T. Leenstra Head of National Coordination Centre for Infectious Disease Control
	Ms E. Marra Programme Leader GOR-COVID 19
	Mr P. Steenhuis Senior policy officer
VNG Association of Netherlands municipalities	Mr H. Boonstra Management Advice Expert
Municipality of Rotterdam	Ms A. Bouman Crisis Management Coordinator
otterdam-Rijnmond Municipal Health ervice	Mr W. Bijlsma Crisis Management Coordinator
	Ms M. Lamore Head of Department of Public Health
Hollands Noorden Municipal Health Service	Mr E.J. Paulina Director of Public Health

Other	
Berenschot	Ms J. Vlagsma Safety and Crisis Management Consultant
Van de Bunt consultants	Mr N. Buller Partner
	Ms M. Huurdeman Partner
	Mr J. van Koppen Consultant
The Dutch Central Bank (DNB)	Ms E. Hagendoorn Product owner, Statistics Publication Team
	Mr B. Heerma van Voss Economist
	Mr G. Schotten Economist
ЕММА	Ms L. van de Wijngaert Researcher

Appendix 2. Assessment framework for pandemics

The assessment framework is published as a separate appendix to this advisory report.



This is a publication of the Societal Impact Team

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