



**Type of document:** Scoping review

**Experts involved:** Paulina Kliem and Sarah Tschudin Sutter on behalf of the Expert Group Infection Prevention and Control  
Nicola Low on behalf of the Expert Group for Public Health

**Date:** 24/04/2021

**Contact person:** Sarah Tschudin Sutter, Nicola Low

**Considerations for an alert system for infectious diseases, focus on COVID-19: a scoping review of tier systems used in other countries and current data.**

*This policy brief is a review of different tier systems. Considerations for the 3-Phasenmodell will be published separately.*

**Key points**

1. Tier systems have three elements. First, a number of tiers (levels) specifies the epidemiological situation of SARS-CoV-2 transmission, as defined by specific indicators. Second, each tier includes a package of measures that corresponds to the intensity of control needed to maintain the epidemiological situation at the specified level. Third, changes in the indicators that show an improvement or worsening of the epidemiological situation mean that less restrictive or more restrictive measures should be implemented.
2. Tier systems give clarity to authorities, individuals, businesses and services to understand, and prepare for a packages of measures, which aims to control transmission of an infectious disease. In most countries, a tier system has been developed for the COVID-19 pandemic. Some countries, such as Singapore and China adapted an existing system that was developed after the 2002/3 SARS pandemic.
3. In 17 systems analyzed from 11 countries, there was a median of four tiers. The most common indicators used to define the criteria for the tiers were the 7-day incidence of cases per 100,000 population and intensive care unit occupancy. The number and types of measures at each tier vary widely between systems.
4. The Swiss Federal Office of Public Health information campaigns, use different colors to indicate specific measures to control SARS-CoV-2 transmission at different stages of the epidemic in Switzerland. 14-day incidence, ICU-occupancy, and the 7-day average of the effective reproductive number and hospitalizations have been used to guide the implementation of stricter measures. This could provide the basis for the development of a sustainable pandemic readiness and response plan, including measures to deal with the current COVID-19 pandemic and beyond.

## Introduction

Many countries and regions around the world use frameworks, known as tier (also known as traffic light, or alert) systems, to respond to changes in the transmission of SARS-CoV-2 (see list of government sources at the end of this document). These response systems have three components. First, a number of tiers (levels) specifies the epidemiological situation of SARS-CoV-2 transmission, as defined by specific indicators. Second, each tier includes a package of measures that corresponds to the intensity of control needed to maintain the epidemiological situation at the specified level. Third, changes in the indicators that show an improvement or worsening of the epidemiological situation mean that less restrictive or more restrictive measures should be implemented.

Tier systems have been designed to reduce the risks and impact of COVID-19 on a population. They aim to give clarity to authorities, individuals, businesses and services to understand, anticipate and prepare for the measures that could be introduced to control transmission of SARS-CoV-2. These systems are based on known systems for responding to national emergencies. In many countries, they were developed when SARS-CoV-2 became epidemic. In others, e.g. Singapore and China, a generic response plan for respiratory diseases, developed after the 2002/2003 SARS epidemic, was adapted to SARS-CoV-2. In New Zealand, public health experts suggested that rapid adoption of a four-level alert system, which resulted in a lockdown at an early stage of the epidemic, contributed to the success of the national public health response.<sup>1</sup>

In this document, we 1) describe tier systems developed in different countries in response to the COVID-19 pandemic; 2) compare the measures included in public health campaigns launched by the Federal Office of Public Health (FOPH) with tier systems and 3) describe the response plans for respiratory diseases in Singapore and China.

## 1. Rapid review of tier systems for the control of COVID-19

We purposively chose countries for which we found openly accessible information in English, French, German and Spanish on official government websites from high and middle income countries.

We analyzed 17 different tier systems from 11 countries in Europe (Austria, England, France, Germany, Ireland, Spain), North and South America (Canada and Mexico), Africa (South Africa) and Oceania (Australia and New Zealand). Tier systems may differ within countries, so we analyzed four German systems (Berlin, Bavaria, Baden-Württemberg, and Hessen) and three Canadian systems (Quebec, Ontario, Manitoba) separately.

We first summarized the number of levels in each tier system and the indicators that define each tier. We then tabulated the measures included in the systems.

### ***Number of tiers and indicators that define the tiers***

The median number of tiers proposed was four (range, three to five). The median number of indicators per level was three (range one to 46). Table 1 summarizes the categories of epidemiological or health system indicators that are specified by the different systems. Epidemiological criteria are either general descriptions of a situation, such as 'low transmission' (Ireland, level 1) or 'prepare' (New Zealand, level 1, 'the disease is contained in New Zealand'), or they give specific criteria based on routine surveillance or modelling, e.g. test positivity <5%, new cases <10 per 100,000 and  $R < 1$  (France, level 1). Countries that use health system indicators all refer to intensive care unit or contact tracing capacity.

Of note, these systems were developed before any vaccines had been licensed. A new system might include specific levels of vaccination coverage in the population, or in a particular group of people

as an indicator for moving from a more restrictive to a less restrictive level. Adaptation over the course of the pandemic is a feature of the tier systems that we reviewed.

**Table 1:** Categories of indicators used to define different tiers

Indicators	n (total, 17)	(%)
<b>Epidemiological indicators</b>		
Qualitative description of local epidemiology <sup>1</sup>	15	(88)
Effective reproductive number	8	(47)
New cases per 100'000 inhabitants	11	(65)
Test positivity rate	9	(53)
<b>Health system indicators</b>		
Healthcare system capacity, e.g. intensive care unit occupancy	11	(65)
Public health follow-up, e.g. contact tracing capacity	6	(35)

<sup>1</sup>see Table 2 for details in specific countries

Table 2 stratifies each indicator considered, by level/tier. There is considerable variability in the absolute values chosen, but the general descriptions of the local epidemiological situation are more consistent. Level/tier 1 defines a situation in which SARS-CoV-2 is still detected, but at 'sporadic', 'stable' or 'low' levels, increasing to level/tier 4, with 'extensive transmission', 'critical' or 'widespread outbreaks'. The epidemiological situation in Switzerland would have fulfilled the strictest of the criteria for level/tier 1 (Baden-Württemberg/Germany) only in April and May 2020. As of 21.04.2021, the 7-day incidence of 163 per 100,000 in Switzerland would correspond to level/tier 4 in the countries using this indicator.

**Table 2:** Indicators considered stratified by level/tier, with level/tier 1 as the lowest

	Level/tier 1		Level/tier 2		Level/tier 3		Level/tier 4	
	n	(%)*	n	(%)*	n	(%)*	n	(%)*
<b>Epidemiological indicators</b>								
Local epidemiology	3 <sup>a</sup>	(18)	3 <sup>e</sup>	(18)	3 <sup>i</sup>	(18)	3 <sup>m</sup>	(18)
Effective reproductive number	5 <sup>b</sup>	(29)	5 <sup>f</sup>	(29)	5 <sup>j</sup>	(29)	3 <sup>n</sup>	(18)
Cases per 100'000 inhabitants	9 <sup>c</sup>	(53)	8 <sup>g</sup>	(47)	9 <sup>k</sup>	(53)	7 <sup>o</sup>	(41)
Test positivity rate	6 <sup>d</sup>	(35)	6 <sup>h</sup>	(35)	6 <sup>l</sup>	(35)	5 <sup>p</sup>	(29)
<b>Health systems indicators</b>								

Healthcare system capacity	7	(41)	7	(41)	8	(47)	6	(35)
Public health follow-up	4	(23)	4	(23)	4	(23)	4	(23)

\* total number of systems analyzed, n=17.

### Explanation of country level/tier indicators

At all levels and tiers, the health system indicators refer to different levels of intensive care unit and of contact tracing capacity. The exact criteria are not described further.

#### Level/tier 1

a. Sporadic cases within the country (New Zealand), low transmission (Ireland), low to undetectable (Manitoba/Canada)

b. <1.5 (Mexico), <1.1 (Berlin/Germany), <1(France, Spain, Ontario/Canada)

c. <10 (Baden-Württemberg/Germany, Spain, France, Ontario/Canada) <20 (Berlin/Germany, Hessen/Germany), <25 (Austria), <35 (Bavaria/Germany), <50 (Mexico)

d. <0.5% (Ontario/Canada), <4% (Spain), <5% (France), <30% (Mexico), not clearly specified (Austria, Manitoba/Canada)

#### Level/tier 2

e. secondary spread (Ireland), household to close contact transmission (Manitoba/Canda) clusters in >1 region (New Zealand)

f. 1 (Ontario/Canada), >1(France), >1.1 (Berlin/Germany), <1.1(Spain), <2 (Mexico)

g. >10 (Spain, France), >10 or doubling of cases in 2 consecutive weeks (Hessen/Germany), 10-24.9 (Ontario/Canada), >20 (Berlin/Germany), >25 and minimum of 10 cases (Austria), >35 (Bavaria, Germany), <75 (Mexico)

h. <5% (France), <7% (Spain), 0.5-1.2% (Ontario/Canada), <40% (Mexico), not clearly specified (Austria, Manitoba/Canada)

#### Level/tier 3

i. Secondary spread (Ireland), transmission across states (Manitoba/Canada), multiple clusters in multiple regions (New Zealand)

j. 1-1.1 (Ontario/Canada), >1.2 (Berlin/Germany), >1.5 (France), <1.5 (Spain), <3 (Mexico)

k. >30 (Berlin/Germany), >50 (Bavaria/Germany, France, Austria), 35 (Hessen/Germany, Baden-Württemberg/Germany), >25 (Spain), 25-39.9 (Ontario/Canada), >100 (Mexico)

l. >10% (France), >7% (Spain), 1.3-2.4% (Ontario/Canada), <50% (Mexico), not clearly specified (Austria, Manitoba/Canada)

#### Level/tier 4

m. Secondary or tertiary spread (Ireland), extensive transmission (Manitoba/Canada), widespread outbreaks (New Zealand)

n. <2 or >2 (Spain), >1.2 (Ontario/Canada), >2.5 (Mexico)

o. >100 (Bavaria/Germany, Mexico, Austria), 50 (Hessen/Germany, Baden-Württemberg/Germany), >75, >125 (Spain), >40 (Ontario/Canada)

p. >10-15% (Spain), >2.5 (Ontaria/Canada), >50% (Mexico), not clearly specified (Austria, Manitoba/Canada)

### **Public health measures considered at different levels in the tier systems**

Tier systems define packages of public health measures to be implemented at each different level/tier of intensity (outlined above). Table 3 summarizes the different public health measures included in the tier systems reviewed, as well as the levels at which they are introduced within each system.

Restrictions of the number of people allowed to gather, regulations for restaurants and bars, regulations for sport activities, mask mandates in different settings and regulations of public events are among the most frequently recommended public health measures considered by the tier systems reviewed. The option of a lockdown was included as component of the tier system in nine of the 17 systems (53%). Two systems pre-specified criteria to move to a lockdown (Ireland and New Zealand).

**Table 3:** Public health measures considered in tier systems and levels at which these are introduced

	n	%*	Level at introduction (number of systems)
<b>Mask mandate (any)</b>	12	(71)	
Clubs	6	(35)	1 (5) and 3 (1)
Outdoors	6	(35)	1 (3), 2 (1), 3 (1), 4 (1)
Public institutions	11	(65)	1 (8), 2 (1), 3 (2)
Public transport	10	(59)	1 (10)
Restaurants/bars	10	(59)	1 (8), 3 (2)
Retail	8	(47)	1 (6), 2 (1), 3 (1)
Schools	8	(47)	1 (5), 3 (2), 4 (1)
Sports	6	(35)	1 (4), 2 (1), 3 (1)
Workplace	6 <sup>a</sup>	(35)	1 (4), 3 (2)
<b>Restriction of time outdoors</b>	2	(12)	2 (1), 4 (1)
<b>Restriction of number of people allowed to gather</b>	14	(82)	
Indoors	12	(71)	1 (9), 2 (2), 3 (1)
Outdoors	12	(71)	1 (7), 2 (3), 3 (2)
<b>Regulations for restaurants/bars</b>	14	(82)	

Limited number of people per table	5	(29)	1 (2), 2 (3)
Sitting requirement	8	(47)	1 (2), 2 (5), 4 (1)
Closing hour 12am	6	(35)	2 (3), 3 (3)
Closing hour 10pm	6	(35)	1 (1), 2 (2 <sup>b</sup> ), 3 (3 <sup>c</sup> )
<b>Regulations for sport activities</b>	13	(76)	
Screening of participants	2	(12)	1 (1), 3 (1)
Limited number of participants indoors	10	(59)	1 (7), 2 (3)
Contact sports prohibited	9	(53)	1 (1), 2 (3), 3 (3), 4 (2)
<b>Regulations of public events</b>	12	(71)	
Screening of participants	2	(12)	2 (2)
Limited number of participants indoors	13	(76)	1 (7), 2 (4), 3 (1), 4 (1)
Limited number of participants outdoors	8	(47)	1 (6), 3 (1), 4 (1)
<b>School closure</b>	4	(23)	4 (4)
<b>Home office recommendation</b>	9	(53)	1 (6), 2 (1), 3 (2), 4 (1)
<b>Regulations for retail</b>	11	(65)	
Entrance screening	2	(12)	2 (1), 3 (1)
Limited number of visitors per store	7	(41)	1 (2), 2 (3), 3 (2)
<b>Regulations of entertainment</b>	9	(53)	
Adult entertainment	4	(23)	1 (2), 2 (2)
Cinemas	8	(47)	3 (5), 4 (3)
Performing arts	8	(47)	3 (5), 4 (3)
<b>Regulations for official ceremonies (weddings/funerals)</b>	10	(59)	
Limited number of participants	10	(59)	1 (8), 2 (1), 4 (1)
*of total number of systems analyzed (n=17)			
a. Mentioned in 3 additional tier systems if distancing is not possible			
b. Only for bars in one tier system			
c. Only for new guests in one tier system			

## **2. Comparisons between the public health campaigns of the Federal Office of Public Health (FOPH) in Switzerland with international tier systems**

In this section we compare the information campaign against the spread of SARS-CoV-2 introduced by the FOPH in February 2020, with tier systems used in other countries.

### ***Color coding***

The FOPH has assigned six different colors to information campaigns launched since February 2020. The colors used at each stage were not announced in advance. The colors yellow (February 2020), red (introduced in March 2020), grey (introduced in March/April 2020), pink (introduced in May 2020), and orange (introduced in October 2020) were used to communicate non-pharmaceutical interventions (NPI). The color blue was used in June 2020 to introduce more unfamiliar NPI to the Swiss public, such as a mask mandate in public transportation, the release of the SwissCovidApp, and reinforcement of the principle of contact tracing.

Compared with other globally created systems, the FOPH did not adopt traffic-light color grading. This may result in a less intuitive grading system. Then again, the absence of the color green may help the population to stay vigilant, assuming that even the lowest alert level requires adherence to safety measures.

### ***Differentiating between levels of the FOPH response***

The color coding of the FOPH campaigns has indicated the introduction of, or a change to, different packages of measures. The colors do not correspond with pre-specified indicators of the epidemiological situation. Compared with other alert systems, the red backdrop has been used in three different posters with a wide range of recommended measures. It was displayed in early 2020 to announce social distancing combined with personal hygiene and again, later in the year, for a social shutdown. In other countries, the same color has not been re-used. More recently, 14-day incidence, ICU-occupancy, and the 7-day average of the effective reproductive number and hospitalizations have been used to guide the implementation of stricter measures.

### ***Introduction of non-pharmaceutical interventions (NPI) per level***

Compared with most of the global tier systems analyzed, NPI in the FOPH campaign were introduced in later levels. The first, yellow, campaign poster (correlating with a level 1 response) included only washing hands, sneezing hygienically and staying at home when feeling sick. In comparison, level/tier 1 in most other analyzed tier systems includes mask-wearing in different social settings and a restriction of the number of people allowed to gather in private, for work out and for weddings or funerals. Furthermore, many countries already advise working from home, if possible. It has to be taken into account, however, that the “yellow campaign” was launched at the beginning of the pandemic, while many tier systems were either introduced later on, or might have modified their content at a later stage.

Comparable to a level/tier 2, the red campaign of early 2020 announced social distancing. Restrictions for restaurants and retail, such as a sitting requirement and limitation of visitors per store, were introduced by most countries at level 2. Additionally, they further reduced the number allowed to gather for events and in private.

Pink FOPH posters, correlating with a level/tier 3, propagate home office and mask wearing if social distancing is not possible. In other alert systems, the introduction of a closing hour for restaurants, entrance screening in retail and of participants in sport clubs, the prohibition of contact sports, and the regulation of cinemas and performing arts was mostly started in level 3.

Orange posters, correlating with a level/tier 4, included contact tracing, using the SwissCovidApp and explaining the concept of isolation and quarantine. The closure of schools was decided by most countries (mostly only for higher education and excluding children with special needs) at level 4.

Finally, grey posters communicated the lockdown in March/April 2020 and has not been used since then. Half of the other analyzed alert systems included a lockdown at the highest alert level.

### **3. Pandemic readiness and response plans for respiratory diseases, developed in response to SARS 2002/2003**

In response to the SARS epidemic in 2002/2003, countries such as Singapore and China developed generic response plans for respiratory diseases. These systems aim to achieve sustainable pandemic readiness and include measures that are being used to manage the ongoing COVID-19 pandemic caused by SARS-CoV-2. They may provide a foundation for the development of a sustainable Swiss response system and are therefore outlined separately.

#### ***Singapore's DORSCON (Disease Outbreak Response System Condition)***

After the 2002/2003 SARS pandemic, Singapore launched a national strategy for pandemic response. It focuses on detecting the importation of a novel acute respiratory pathogen with pandemic potential. The objective is to sustain the country through the first epidemic wave and ensure preparedness for vaccination of the entire population, when available.

DORSCON consists of 4 assessment levels and 3 response levels. The first response level is titled „Alert“, consisting of border control measures and stopping the spread from individual imported cases. The „Containment“ level is initiated when the disease has reached Singapore and the goal is to stop or limit the spread. The last level is being reached when the disease is spreading widely through the community and titled „Mitigation“. This last level demands the activation of business continuity plans, a surge in capacity of healthcare and essential services, and community-based public health measures.<sup>2</sup>

DORSCON Levels:

Green

- Nature of disease: Mild disease or severe but limited transmission and occurring outside of Singapore
- Impact on daily life: Minimal e.g. detecting and minimizing importation, border control, some containment of imported cases
- Advice to public: Maintain good personal hygiene, stay home when sick, look out for health advisories

Yellow

- Nature of disease: Disease is severe and spreads easily but is occurring outside of Singapore or disease is mild and spreading in Singapore or is being contained (including vaccine)
- Impact on daily life: Minimal e.g. additional measures at borders and healthcare settings expected
- Advice to public: Maintain good personal hygiene, stay home when sick, look out for health advisories

Orange

- Nature of disease: Disease is severe and spreads easily but has not spread widely in Singapore



- Impact on daily life: Moderate e.g. quarantine, temperature screenings, visitor restrictions at hospitals
- Advice to public: Maintain good personal hygiene, stay home when sick, look out for health advisories, comply with control measures:

During the Covid-19 pandemic, the orange level was adapted to incorporate three phases, outlining steps for a safe re-opening (gradual re-opening of some activities in phase 1, safe transition, i.e. broader re-opening of social and economic activities in phase 2, safe nation, i.e. resumption of social, cultural, religious and business gatherings or events).<sup>3</sup>

#### Red

- Nature of disease: Disease is severe and is spreading widely
- Impact on daily life: Major e.g. school closures, work from home orders, significant number of deaths
- Advice to public: Maintain good personal hygiene, stay home when sick, look out for health advisories, comply with control measures, practice social distancing: avoid crowded areas

The DORSCON System was reviewed by the WHO Joint External Evaluation of the International Health Regulations (IHR)<sup>4</sup> in 2018.<sup>5</sup>

#### ***China's PHEMS (Public Health Emergency Management System)***

The public health emergency management can be divided into four phases and has five aspects. The four phases are emergency prevention, preparedness, response and recovery. The five aspects are legislation, institution / organization, management mechanism, emergency response plan and social mobilization. The State Public Health Emergency Response Plan System in China is established based on the "Master State Plan for Rapid Response to Public Emergencies". The main parts of this system are two specialized plans, namely the "National Plan for Rapid Response to Public Emergencies" and the "National Plan for Medical Care and Medical Relief to Public Emergencies".<sup>6</sup>

The National Emergency Plan for Public Health Emergencies (PHEMS) is divided into four levels according to the nature, degree of harm, and scope of public health emergencies: particularly serious (level I), major (level II), large (level III), and general (level IV). Examples of infectious disease „features“ that might qualify as a major public health emergency are given. The response for each level is purposefully not laid out in PHEMS (compared to the Health Rescue Plan in Public Emergencies describing the measures per level such as chemical leakage accidents), but the extent of measures that might be necessary is described.<sup>7</sup>

#### **Conclusions**

Tier systems propose a package of measures designed to maintain the epidemiological situation at a specified level. Such systems have the potential to provide clarity to authorities, individuals, businesses and services to understand, and prepare for measures aiming to control transmission of an infectious disease. In many countries, a tier system has been developed for the COVID-19 pandemic. Some countries, such as Singapore and China adapted an existing system that was developed after the 2002/3 SARS pandemic. The Swiss Federal Office of Public Health information campaigns, using different colors to indicate different measures to control SARS-CoV-2 transmission at different stages of the epidemic in Switzerland could provide the basis for the development of a sustainable pandemic readiness and response plan, including measures to deal with the current COVID-19 pandemic and beyond.

## References

1. Jefferies, S., et al., COVID-19 in New Zealand and the impact of the national response: a descriptive epidemiological study. *Lancet Public Health*, 2020;5:e612-e623.
2. <https://www.moh.gov.sg/docs/librariesprovider5/diseases-updates/interim-pandemic-plan-public-ver- april-2014.pdf> MOH Pandemic Readiness and Response Plan for Influenza and Other Acute Respiratory Diseases (Singapore, revised 04/2014)
3. <https://www.gov.sg/article/covid-19-resources> Covid Resources, A Safe Singapore
4. The International Health Regulations (IHR (2005)) are the legal framework for global health security with all Member States required to develop minimum core capacities to detect, assess, report and respond to acute public health events and emergencies.
5. <https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.25-eng.pdf> JEE of IHR Mission Report Singapore, 2018
6. <https://www.hkjcdpri.org.hk/download/policy/PolicyBriefDisasterandEmergMxSysinChina.pdf>
7. [http://www.gov.cn/yjgl/2006-02/26/content\\_211654.htm](http://www.gov.cn/yjgl/2006-02/26/content_211654.htm) National Emergency Plan for Public Health Emergencies (PHEMS)

## Government Sources in Alphabetical Order:

Australia:

<https://www.health.gov.au/resources/publications/coronavirus-covid-19-commonoperating-picture-19-november-2020>

<https://www.health.gov.au/sites/default/files/documents/2020/11/coronavirus-covid-19-common-operating-picture-19-november-2020.pdf>

<https://www.health.gov.au/resources/publications/3-step-framework-for-acovidsafe-australia>

[https://www.health.gov.au/sites/default/files/documents/2020/06/3-step-framework-for-a-covidsafe-australia-3-step-framework-for-a-covidsafe-australia\\_2.pdf](https://www.health.gov.au/sites/default/files/documents/2020/06/3-step-framework-for-a-covidsafe-australia-3-step-framework-for-a-covidsafe-australia_2.pdf)

Austria:

<https://corona-ampel.gv.at/karte-corona-ampel/>

<https://corona-ampel.gv.at/corona-kommission/bewertungskriterien/>

<https://corona-ampel.gv.at/aktuelle-massnahmen/>

Berlin:

<https://www.corona-ampel-berlin.de/>

Bavaria:

<https://www.stmfh.bayern.de/aktuelles/corona/coronaampel.htm>

Baden-Württemberg:

<https://www.baden-wuerttemberg.de/de/service/pressepressemitteilung/pid/land-wappnet-sich-fuer-moegliche-zweite-corona-welle/>

[https://www.baden-wuerttemberg.de/fileadmin/redaktion/m-sm/intern/downloads/Downloads\\_Gesundheitsschutz/Corona\\_Stufenkonzept\\_20090914.pdf](https://www.baden-wuerttemberg.de/fileadmin/redaktion/m-sm/intern/downloads/Downloads_Gesundheitsschutz/Corona_Stufenkonzept_20090914.pdf)

[https://www.baden-wuerttemberg.de/fileadmin/redaktion/m-sm/intern/downloads/Downloads\\_Gesundheitsschutz/Corona\\_Matrix\\_Lebensbereiche\\_Pandemiestufen\\_200914.pdf](https://www.baden-wuerttemberg.de/fileadmin/redaktion/m-sm/intern/downloads/Downloads_Gesundheitsschutz/Corona_Matrix_Lebensbereiche_Pandemiestufen_200914.pdf)

China:

<https://www.hkjcdpri.org.hk/download/policy/PolicyBriefDisasterandEmergMxSysinChina.pdf>

[https://www.unog.ch/80256EDD006B8954/\(httpAssets\)/E01310E1900536B0C1257783005833EA/\\$file/China+WP+1.pdf](https://www.unog.ch/80256EDD006B8954/(httpAssets)/E01310E1900536B0C1257783005833EA/$file/China+WP+1.pdf)

[http://www.gov.cn/yjgl/2006-02/26/content\\_211654.htm](http://www.gov.cn/yjgl/2006-02/26/content_211654.htm)

England:

<https://www.gov.uk/government/publications/local-covid-alert-level-posters>

France:

[solidarites-sante.gouv.fr](https://solidarites-sante.gouv.fr) <https://solidarites-sante.gouv.fr>

[gouv.fr/soins-et-maladies/maladies/maladies-infectieuses/coronavirus/etat-deslieux-et-actualites/article/points-de-situation-covid-19](https://solidarites-sante.gouv.fr/soins-et-maladies/maladies/maladies-infectieuses/coronavirus/etat-deslieux-et-actualites/article/points-de-situation-covid-19)

<https://www.gouvernement.fr/infocoronavirus#cpotection>

<https://www.gouvernement.fr/info-coronavirus/carte-et-donnees>

Hessen:

<https://www.hessen.de/presse/bildergalerie/das-hessische-eskalationskonzept-imampelsystem>

[https://www.hessen.de/sites/default/files/media/hessen.de\\_land/ampelsystem\\_in\\_hessen.pdf](https://www.hessen.de/sites/default/files/media/hessen.de_land/ampelsystem_in_hessen.pdf)

Manitoba:

<https://www.gov.mb.ca/covid19/restartmb/prs/system/index.html>

<https://www.gov.mb.ca/covid19/restartmb/prs/system/green-limited-risk.html>

<https://www.gov.mb.ca/covid19/restartmb/prs/system/yellow-caution.html>

<https://www.gov.mb.ca/covid19/restartmb/prs/system/orange-restricted.html>

<https://www.gov.mb.ca/covid19/restartmb/prs/system/red-critical.html>

[https://www.gov.mb.ca/asset\\_library/en/restartmb/pandemic\\_response\\_system.pdf](https://www.gov.mb.ca/asset_library/en/restartmb/pandemic_response_system.pdf)

Mexico:

<https://coronavirus.gob.mx/semaforo/#:~:text=El%20Sem%C3%A1foro%20de%20riesgo%20epidemiol%C3%B3gico,de%20contagio%20de%20COVID%2D19>

[https://coronavirus.gob.mx/wp-content/uploads/2020/10SemaforoCOVID\\_Metodo.pdf](https://coronavirus.gob.mx/wp-content/uploads/2020/10SemaforoCOVID_Metodo.pdf)

New Zealand:

<https://covid19.govt.nz/alert-system/>

<https://covid19.govt.nz/assets/resources/tables/COVID-19-alert-levels-summary.pdf>

<https://covid19.govt.nz/alert-system/alert-level-1/>

<https://covid19.govt.nz/alert-system/alert-level-2/>

<https://covid19.govt.nz/alert-system/alert-level-3/>

<https://covid19.govt.nz/alert-system/about-the-alert-system/#alert-level-4-%E2%80%94-lockdown>

<https://covid19.govt.nz/assets/resources/tables/COVID-19-alert-levelsdetailed.pdf>

Ontario:

<https://www.ontario.ca/page/covid-19-responseframework-keeping-ontario-safe-and-open#levels>

<https://files.ontario.ca/moh-covid-19-response-framework-keeping-ontario-safe-and-open-en-2020-11-13.pdf>

Quebec:

[https://cdn-contenu.quebec.ca/cdn-contenu/sante/documents/Problemes\\_de\\_sante/covid-19/20-210-paliers-alerte-ANG.pdf?1599508308](https://cdn-contenu.quebec.ca/cdn-contenu/sante/documents/Problemes_de_sante/covid-19/20-210-paliers-alerte-ANG.pdf?1599508308)

<https://www.quebec.ca/en/health/health-issues/a-z/2019-coronavirus/progressive-regional-alert-and-intervention-system/>

<https://www.quebec.ca/en/health/health-issues/a-z/2019-coronavirus/progressive-regional-alert-and-intervention-system/level-1-vigilance-green>

<https://www.quebec.ca/en/health/health-issues/a-z/2019-coronavirus/progressive-regional-alert-and-intervention-system/level-2-early-warning-yellow/>

<https://www.quebec.ca/en/health/health-issues/a-z/2019-coronavirus/progressive-regional-alert-and-intervention-system/level-3-alert-orange/>

<https://www.quebec.ca/en/health/health-issues/a-z/2019-coronavirus/progressive-regional-alert-and-intervention-system/level-4-maximum-alert-red/>

Singapore:

<https://www.gov.sg/article/what-do-the-different-dorscon-levels-mean>

<https://www.moh.gov.sg/covid-19>

<https://www.moh.gov.sg/docs/librariesprovider5/diseasesupdates/interim-pandemic-plan-public-ver- april-2014.pdf>

<https://extranet.who.int/sph/sites/default/files/jeeta/WHO-WHE-CPI-REP-2018.25-eng.pdf>

<https://www.moh.gov.sg/covid-19/resources>

South Africa:

<https://wiki.unece.org/display/CTRBSBC/South+Africa>

<https://www.gov.za/documents/disaster-management-act-regulations-alertlevel-1-during-coronavirus-covid-19-lockdown-18>

<https://www.gov.za/coronavirus/alert-level-2>

<https://www.gov.za/covid-19/about/disaster-management-act-regulationsalert-level-3-during-coronavirus-covid-19-lockdown>

<https://www.gov.za/documents/disaster-management-act-regulations-29-apr-2020-0000>

<https://www.gov.za/covid-19/resources/regulations-and-guidelines-coronavirus-covid-19>

Spain:

<https://www.lamoncloa.gob.es/serviciosdeprensa/notasprensa/sanidad14/Paginas/2020/221020-covid-interterritorial.aspx>

[https://www.lamoncloa.gob.es/serviciosdeprensa/notasprensasanidad14/Documents/2020/221020\\_Actuacionesrespu estaCOVID.pdf](https://www.lamoncloa.gob.es/serviciosdeprensa/notasprensasanidad14/Documents/2020/221020_Actuacionesrespu estaCOVID.pdf)

Wales:

<https://gov.wales/unlocking-our-society-and-economy-wales-roadmap-published>

<https://media.service.gov.wales/media-library/40664-unlocking-our-society-andeconomy-en>