# PRE-APPLICATION FORM – BOTTOM-UP CALL
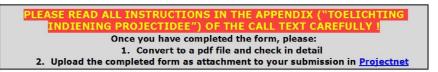
## COVID 19 programme

### Deadline for submission: 25th of May, 2020 (14:00 h)

> **PLEASE READ ALL INSTRUCTIONS IN THE APPENDIX ("TOELICHTING INDIENING PROJECTIDEE") OF THE CALL TEXT CAREFULLY !**
> **Once you have completed the form, please:**
> 1. **Convert to a pdf file and check in detail**
> 2. **Upload the completed form as attachment to your submission in Projectnet**

**BASIC APPLICATION DETAILS (front page)**

**NAME OF MAIN APPLICANT:**

Prof. Dr.  (10)(2e)

**ORGANISATION:**

Tilburg University

**PROJECT TITLE:**

Learning from the first phase of the Corona Virus outbreak: Assessing the governance approaches in six countries

**DATASTEWARD:**

Who is the datasteward that supports the planning of Open Science and FAIR data in your project? See the webinars for information and support to datastewards on the ZonMw website.

☒ I have involved the following datasteward with my project:
Name: Hanneke Teunissen / Petra Ploeg
Institution: Research Data Office, Tilburg University
E-mail: (10)(2e) @tilburguniversity.edu

Has attended the webinar: ☒ Yes ☐ No

☐ I do not yet have a datasteward.

## 1. PROBLEM DEFINITION AND OBJECTIVE(S):

What lessons can be drawn from the first phase of the outbreak of the Corona Virus between mid January and mid May with regard to the countries' responses? Which countries responded the best so far and what best practices can we identify and use for the following phases and future outreaks? This questions are currently intensely debated in the popular press but also among scientists, which countries managed to best contain the outbreak and which measures had the most effect and what we therefore can learn from this first phase (see for example de Volkskrant May 22, 2020, p. 8/9, New York Times April 4, A German Exception? Why the Country's Coronavirus Death Rate Is Low and Oxford University's Corona Virus Response Tracker).

This first phase started with the initial information about the outbreak of a novel Corona Virus coming out of China by early January with the WHO declaring COVID-19 officially a Public Health Emergency of International Concern (PHEIC) on January 30, 2020 and ended in Europe in mid May 2020, when many European countries started their exit strategies. The last months have shown that even countries, which had developed relatively detailed plans for a pandemic and simulated the response like the Netherlands, were overwhelmed by the complexity and the speed of the outbreak and most countries are still struggling to contain it and to grasp with the economic and social consequences. There is therefore a clear need to learn from this experience.

However, it seems very difficult, if not impossible at this point to establish reasonable causal claims between government responses, - translated into containment and mitigation measures and outcome parameters such as the number of infections, hospital or Intensive Care admissions or the mortality rate. As we are still at the beginning of the pandemic it is unclear how potential further infection waves will play out in the different countries. Second, the conditions in different countries that influence the spread of the virus are too diverse to come to conclusions about the causal relationship between government responses, containment and mitigation measures and their effectiveness . Countries differ for example with regard to their demographic structure, the general health of the population, income, possibilities for physical distancing, mobility and composition of the households, all factors that are presumably important factors influencing the spread of the virus. Third, due to different testingpolicies , outcome indicators are often difficult to compare between countries. Forth, in this first phase, it was also a matter of -so to say- luck or bad luck, how an outbreak commenced. . The initial amount of infections (or introductions) and the presence of accelerating factors (such as mass gatherings, winter sport holidays, carnival and other festivities) have likely contributed to the further spread in the population and to the magnitude of the outbreak. Countries and regions that were hit first, like Italy in Europe or Brabant in the Netherlands showed much higher infection rates than countries or regions which had the opportunity to react timely and put comprehensive measures in place in place before the epidemic could take off (see for example an extensive analysis by the New York Times: The Covid-19 Riddle: Why Does the Virus Wallop Some Places and Spare Others?, May 3, 2020).

Despite these limitations, it is nonetheless vital that we understand the dynamics during this first phase. This is, because we might be confronted with recurrent waves in the future, especially, in the absence of a vaccine or medication. In addition, we have seen several (international) outbreaks of infectious diseases which have challenged the Public Health system since the beginning of this millennium (SARS in 2003, Q fever 2007-2010, the H1N1 pandemic in 2009, the measles outbreak in 2013, Ebola 2014-2015, Zika (2017) and we can expect further outbreaks with new pathogens in the future. Collecting data and drawing lessons from this first phase in a timely manner is therefore essential. Instead of focusing on the impossible task of drawing causal relationships between government responses, containment measures and outcomes, **our research will alternatively assess the quality of governance and organizational responses to contain the Corona Virus outbreak in several different European and Asian countries**. By governance and organizational responses, we broadly refer to the mobilization of institutions, structures of authority and collaboration allocating resources and coordinate or control activity. Our unit of analysis is the so-called organizational network response (Provan and Kenis 2008, Raab et al.,2020/forthcoming) which clearly developed individually in different countries and which can be assessed on their quality as we will explain below. In earlier research it has been demonstrated that a Corona virus outbreak requires a differentiated organizational network response because of its urgent need for knowledge, its high institutional, societal and political risk perception as, well as its broad risk scope (geographical spread, in time and speed, the number and level of concentration within groups in the population, and the consequences for lives, health, wealth and subsequently for societal and political stability) (Kenis et al. 2019).From a previous scenario study on the fictitious outbreak of a New Asian Corona Virus in the Netherlands that has been conducted since 2015 (Raab et al. 2020), we know for example that 28 containment measures need to be implemented with dozens of organizations to contain an outbreak. We also know from previous research, that in infectious disease outbreaks, in our highly connected and decentralized world, it is not only organizations within but also outside the Public Health field that are important for containing an outbreak (Kickbusch, Cassels, Liu 2016). **We will describe the organizational network response in different**

countries and assess their quality by studying **how they solved the four universal problems of organizing for containing the virus outbreak**. These problems are 1) determining what needs to be done:; 2) determining who does what; 3) motivating and incentivizing those who need to become active and 4) have an information system that stipulates who needs to do what and when (Puranam et al. 2015). For example, how is the task of tracking identified, to whom has it been allocated, do those actors have the incentives to do so and do they know when and where to provide the information to?

We thus will investigate the **following research questions**:
1. How did the control measures, that are necessary for the containment of the outbreak in each country, differ between the countries? How were they identified and structured? What was their corresponding time frame?
2. Which tasks were defined to contain the outbreak. How were the tasks distributed with regard to these control measures over the different actors? How did the coordination take place? When were which actors activated?
3. How were the necessary actors motivated and incentivized to follow the instructions. How were they monitored and rewarded/sanctioned?
4. How was information gathered, processed and provided to the actors dealing with the outbreak and the public about the virus, the outbreak and the consequences of the pandemic? Which data and information were negated and why? For example, why was (anecdotal) information from China and Italy, that was much more dramatic than the official WHO data seemingly suppressed in the European countries?
5. How did the four aforementioned organizational processes change over time in response to the changing knowledge/knowledge needs, risk perception and scope?

The proposal therefore connects to theme 1: *Differences between European countries with regard to the effectiveness and impact of measures/strategies in response to the Corona crisis.*

## 2. STRATEGY:

The research will be conducted by an interdisciplinary team of established scientists from the fields of Public Health from the Free University Amsterdam (Prof. Dr. [10)(2e)] (10)(2e)) Public Governance (Prof. Dr. (10)(2e) ) and Organization Studies (Dr. Jörg Raab) both at Tilburg University. We intend to hire two postdoctoral researcher for 18 months, one in Public Health and one in Public Management. The research team builds on a series of successful collaborative research projects in the past.

The project will analyze the governance response to the Corona Virus outbreak in the Netherlands, Sweden, Germany, Belgium, Taiwan and South Korea. The four European countries are selected, because of differences in expected governance approaches The selected countries represent a mixture of federal and centralized states which represent different institutional macro-structures which influence the governance responses. The two Asian countries are selected as contrasting cases. Both have shown rapid, coordinated and relatively centralized responses, which forms an interesting contrast to the more dispersed and slower responses in the European countries. We will reconstruct and analyze the response of the selected countries using the formal legal and organizational plans that were available at the outset of the outbreak and then investigate to what extent and how they were implemented, adjusted and further developed.

Research will be conducted in collaboration with Public Health practitioners and scholars from the selected countries through regular joint workshops starting with the first one within the first month of the project. We will strive to formalize their involvement in the form of an advisory committee. Data will be collected through document studies, news analysis and semi-structured interviews with key experts and actors. The data will be coded deductively on the basis of the frameworks presented above by Kenis et al. (2019) and Purunam et al. (2015). We will feed back the results as they become available to Public Health practitioners already during the ongoing outbreak. We intend to provide the following deliverables:

For Public Health authorities and public administrators
- A web-based tool consisting of best practices in coordinating pandemics in various circumstances
- Handbook on governance models for outbreak control
- Workshop and training.

For peers/scientists
- Knowledge diffusion through webinars (3X) and peer reviewed publications (4X)

For the public, we will provide a project blog regularly reporting results in Dutch and English that can be accessed by a broader public and disseminate that via professional platforms and the public press.

## 3. FEASIBILITY OF THE PROJECT:

**Time Schedule**
1.8. – 15.09.2020: Starting Workshop with research team, stakeholders and advisory team, refining the

analytical framework, preparing data collection.

**15.09.2020 – 30.09.2021**: Data collection in the selected countries, writing case country reports and start with first comparisons., publication of results as they become available, start with web based tool with best practices as they become available, organization of online workshops with advisory committee, interested academics and Public Health professionals to reflect on the preliminary results, providing webinars.

**1.10.2021 – 31.1.2022**: Comparative country analysis, preparing academic publications and handbook on governance models for outbreak control, concluding workshop.

The **interdisciplinary research** team consists of experts in the area of public management and governance and Public Health. It has already been successfully cooperating with tangible outputs in the last five years. By hiring two postdocs with Public Health and Public Management backgrounds, who are already experienced researchers, we can hit the ground running.

## 4. RELEVANCE FOR PRACTICE:

1. **Potential impact**: The project contributes to the learning from the first phase of the Covid-19 pandemic for potential recurring waves of the Corona epidemic and for potential future outbreaks of new pathogens. As the current outbreak has demonstrated, containing such an outbreak is a highly complex governance problem.

2. **Originality**: The research builds on prior research on the understanding of the governance of infectious disease outbreaks in the Netherlands, applies it to the current urgent response in the Netherlands and other European countries and compares it with the two most successful comparable countries in Asia. It adds value to our understanding of the outbreak from a governance and management perspective.

3. **Public funding**: The results are of a high public interest and therefore public financing is appropriate.

4. **Safeguarding**: The findings will be codified and made available and disseminated as laid out above as quickly as possible to Public Health officials and Public Managers, so they can be used to assess and improve the response in the current and prepare for future outbreaks.

5. **Scalability**: The governance approach is relevant not only for the overall response system but also for organizations on the different levels and communicable for possible outbreaks of other infectious diseases now and in the future.

6. **Collaboration**: The project team will be an interdisciplinary collaboration between experts in Public Health and Public Governance with the National Institute for Public Health and the Environment as a major stakeholder. While (10)(2e) (10)(2e) and her team at the Athena Institute bring in the expertise in Public Health and Epidemiology, (10)(2e) and Jörg Raab are bring the expertise in Public Governance. For the full proposal stage, we will look for an expert on the political systems/societies of East Asia (Taiwan and South Korea).

7. **Added value**: The understanding of how highly differentiated and complex organizational systems can be governed to contain infectious disease outbreaks are extremely relevant for both the field of Public Health and Public Governance and Management. With the web-based tool, workshops, webinars and handbook, the findings and insights will become widely available to Public Health professionals and Public Managers both in the Netherlands and internationally and will help prepare countries for future outbreaks.

## 5. PARTICIPATION OF STAKEHOLDERS (e.g.patients, health care providers):

(10)(2e) (10)(2e) as the country coordinator for infectious disease outbreaks at the National Institute of Public Health and the Environment in the Netherlands (RIVM) , a member of the Dutch Outbreak Management Team within and Professor of Responses to Communicable Diseases in Global Health at the VU, Amsterdam brings both academic knowledge and first hand practice experience. With her contacts and with RIVM, the Regionaal Overleg voor Actute Zorg Brabant (request pending), the Taiwanese Public Health Agency (requeste pending), Instituut voor Fysieke Veiligheid (request pending) as stakeholders, we are confident to get access to key informants within the Netherlands and through the RIVM sister institutions in the selected countries.

## 6. LITERATURE REFERENCES (optional):

Kenis, P., Schol, L.G.C., Kraaij-Dirkzwager, M. M., , . 2019. Appropriate Governance Responses to Infectious

Disease Threats.. Risk, Hazards & Crisis in Public Policy 10 (3), 275-293.
Kickbusch, I., Cassels, A., Liu, A. 2016. New Directions in Governing the Global Health Domain - Leadership challenges for the WHO. Global Health Centre Working Paper No. 13.|
Puranam, P., Alexy, O., and Reitzig, M.. 2014. What's "new" about new forms of organizing? Academy of Management

Review 39 (2): 162-180.

Raab, J., Kenis, P., Kraaij–Dirkzwager, M., & ▮▮▮▮, ▮. (2020/forthcoming). Ex ante knowledge for infectious disease outbreaks: Introducing the organizational network governance approach. In: Glückler J, Herrigel G, Handke M (Eds): Knowledge for Governance. Berlin, Heidelberg: Springer series Knowledge & Space.