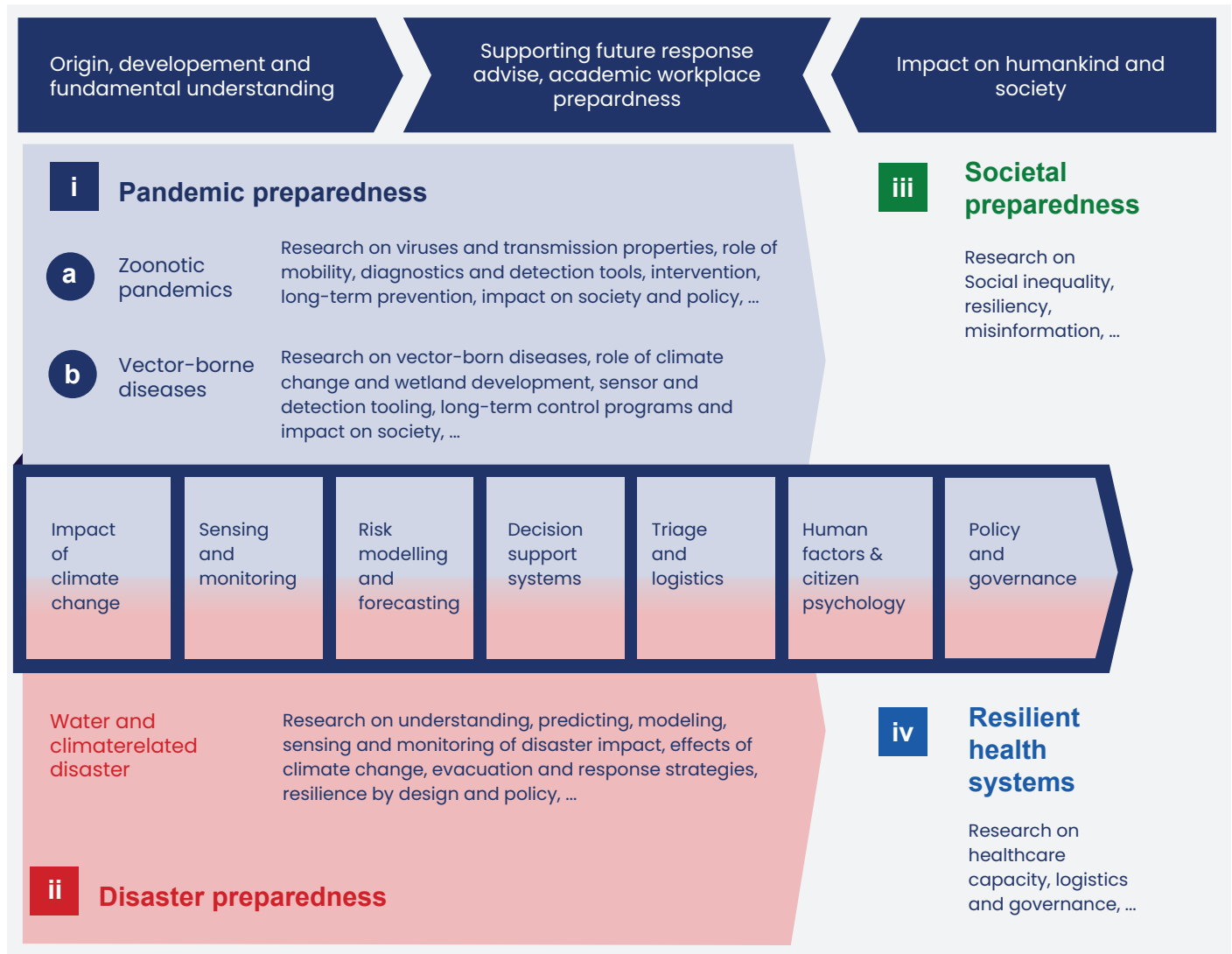


Together, we will reduce risks and build resilience through effective pandemic and disaster prevention, preparedness, and recovery management.

Our aim

PDPC aims to prepare society for future pandemics and disasters. We will reduce vulnerabilities and risks and build resilience through effective disaster prevention, preparedness and recovery measures. Convergence of the technical, medical and social sciences is essential for developing the next generation of approaches to disasters and pandemics.



Board



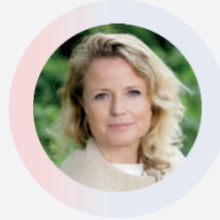
Prof.dr. Marion Koopmans
*Scientific director
PDPC, Erasmus MC*



Prof.dr. Thom Bogaard
*Director Disaster
preparedness research
PDPC, TU Delft*

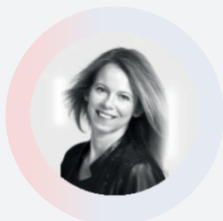


Dr. Tom Emery
*Director Societal
preparedness research
PDPC, Erasmus University
Rotterdam*



Dr. Anja Schreijer
*Director Medical affairs
& Public health
preparedness PDPC,
Erasmus MC*

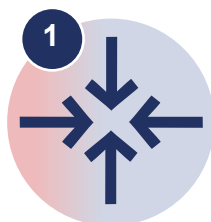
Education



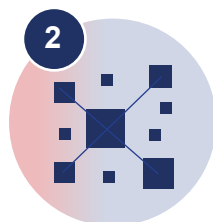
Jeannette de Boer
*Head of Education
PDPC*

Our vision

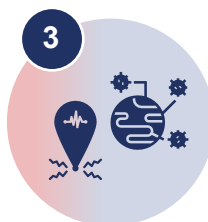
The complexity of pandemics and disasters require convergence, a systemic view, a combined approach to pandemics & disasters, and continuous, long-term commitment.



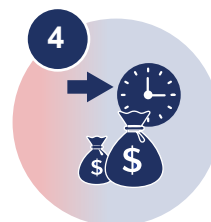
**Convergence
of disciplines**



**Systemic
view**



**Combined approach to
pandemic & disasters**



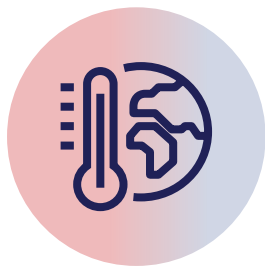
**Long-term, continuous
commitment**

To fulfill this vision and aim, the PDPC conducts research in five frontrunner projects. Moreover, the academic workplace in the PDPC Academy is intended for applied research that combines three key pillars: policy, practice and research. The PDPC also invests in knowledge transfer and education.



In August 2025, Frontrunner 1 researchers temporarily flooded more than a hectare of the Eendragtspolder in Zevenhuizen, to investigate if polders play a role in the spread of viruses by becoming breeding grounds for disease carriers such as mosquitoes and migratory birds.

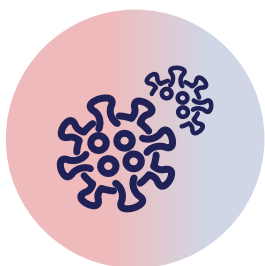
Frontrunner projects



Frontrunner 1: Climate change and vectorborne virus outbreaks

FR1 connects the fields of climate change modelling, landscape-, animal- and insect ecology, virology and public health. The insights will inspire new mitigation measures for the delta, from building with nature solutions to hard infrastructure like locks and gates to mitigate the anticipated increase in salt intrusion.

Principal investigators: Reina Sikkema, Pier Siebesma, Marion Koopmans



Frontrunner 2: Predicting, measuring and quantifying airborne virus transmission

FR2 develops methods for predicting, measuring and quantifying the spread of airborne viruses and improve methods for disinfecting the air. These methods will be adapted for indoor environments and tested in hospitals and nursing homes, to prepare society for future respiratory viruses.

Principal investigators: Ron Fouchier, Sander Herfst



Frontrunner 3: Pandemic lessons for flood disaster preparedness

FR3 identifies what is needed to safeguard access to quality healthcare during floods, and develop tools to increase preparedness. In this process, the lessons learned during the recent floods, the lessons learned from the COVID-19 pandemic and simulations of potential floods in Zuid-Holland are considered.

Principal investigators: Roland Bal, Bas Jonkman



Frontrunner 4: Towards social and urban resilience

FR4 aims to improve the resilience of citizens by investigating the impact of crises on unequal groups within an urban and regional context. Other research includes how to combat disinformation, how to effectively reach vulnerable groups during crises and how to offer them an appropriate action strategy.

Principal investigators: Sake de Vlas, Anja Schreijer



Frontrunner 5: Integrated early-warning surveillance methods and tools

FR5 contributes to the early and risk-based detection and characterization of new viruses. Methods are investigated for representative sampling of drinking water, animal manure, dust on surfaces and wastewater, to obtain sufficient virus material in an effective and reproducible way.

Principal investigators: Miranda de Graaf, Gertjan Medema, Marion Koopmans

PDPC Academy: Public health research for preparedness

Led by Anja Schreijer



Integrated Science for Policy

In this project we work on integrated advisory approaches to improve crisis response. Our research highlights the need for cross-disciplinary collaboration – combining biomedical, social, and economic perspectives – to prevent fragmented decision-making during crises. By organizing simulation exercises with interdisciplinary teams to refine frameworks for integrated advisory, PDPC aims to enhance pandemic preparedness. This line of research will also be pursued in the collaborative UNITY project, which was recently funded by ZonMw.



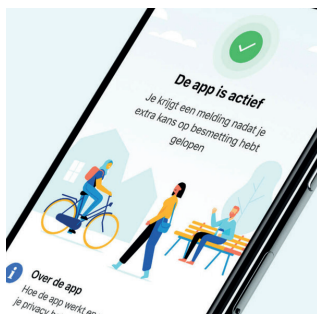
PRESENT project

The PRESENT project ('Pandemic-Related Secondary School Closures: Differentiated Epidemiological, Socio-Educational, and Economic Effects Across Student Subpopulations') investigates the diverse and differentiated impacts of school closures during the COVID-19 pandemic, so that in the event of a future outbreak, decision-makers can appropriately balance the health benefits of closures against their broader societal costs. The findings of the PRESENT project will be translated into policy recommendations concerning school closures and mitigation strategies. This project is funded by ZonMw.



Underserved groups

The PDPC investigates how to design tailored interventions for population subgroups that are disproportionately affected by pandemic-related disease burdens. Using the Tailoring Health Programmes from the World Health Organization, we identify barriers and drivers that influence people's behaviour towards COVID-19 public health and social measures, such as vaccination and testing.



Innovative Infectious Disease Control

Contact tracing is a key intervention in infectious disease control, but it can be challenging to implement successfully. The PDPC investigates the process and impact of contact tracing, and aims to design innovations that can optimize it, both for minimizing disease spread and keeping track of transmission networks.

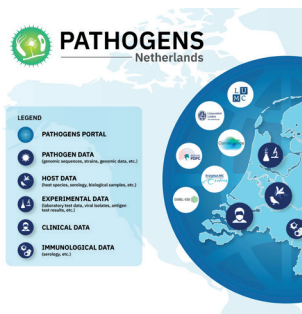
PDPC Academy: Education

Led by Jeannette de Boer



The PDPC Academy aims to facilitate postgraduate students and post-academic knowledge transfer through several education methods, such as interdisciplinary case-based learning and webinars.

Other initiatives



Pathogens Portal

The Pathogens Portal Netherlands provides information about available datasets, resources, tools and services related to pathogens research in the Netherlands. This portal is part of the Network of Pathogen Portal Nodes and provides quick access to pathogen related data for open science from Dutch institutions and collaborations.

Contact: Marion Koopmans



Modelling for preparedness

The Modelling for preparedness initiative aims to advance integrated and interdisciplinary modelling approaches to support decision-making, both for long-term risk analysis and mitigation, as well as to inform response to extreme events.

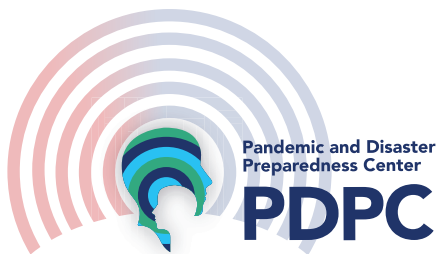
Contact: Thom Bogaard



Economy

Together with Smarter Choices for Better Health (SCBH) and Erasmus Centre for Health Economics Rotterdam (EsCHER), the PDPC aims to develop interdisciplinary research on the economic aspects of pandemic and disaster preparedness. In 2024, 2 projects started to enhance interdisciplinary research on the crossover between pandemic & disaster preparedness and economics.

Contact: Hans van Kippersluis (EsCHER)



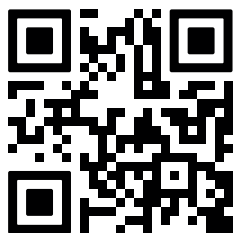
More information

Interested in finding out more about the PDPC? Contact us via email:

PDPC@erasmusmc.nl

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Erasmus MC, TU Delft and Erasmus University Rotterdam have joined forces in the Pandemic and Disaster Preparedness Center (PDPC).



Convergence