

Health Housing Habitat

HIAP & CLIMATE ADAPTATION IN
THE NETHERLANDS



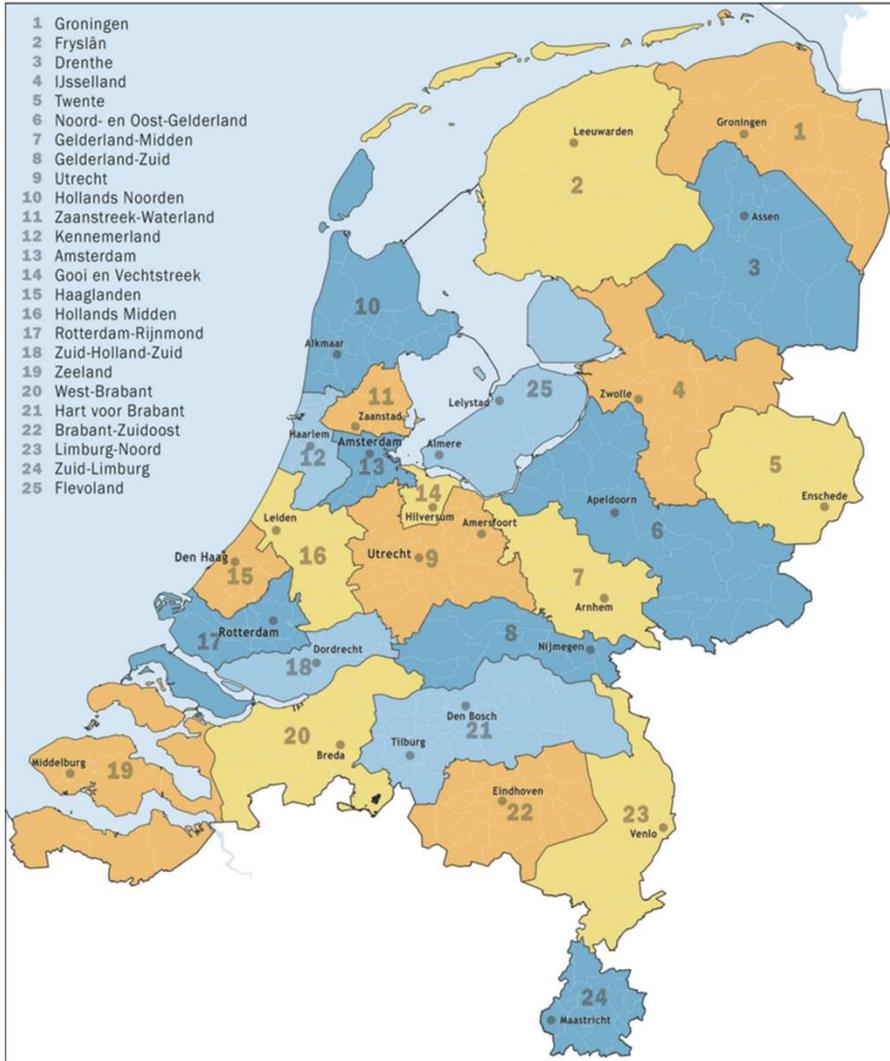
About me

- Patrick Klaassen
- Healthy environment advisor @ GGD Gelderland-Zuid (regional health service)
- Member of the national health service workgroup climate & health
- Expertise in development and implementation of local heat action plans and Heat Adaptation Menu



GEZONDHEIDSZORG 25 GGD regio's

2023



25 Regional Health Services



Health promotion and health protection



Teams Environment & Health

Structure of the presentation



Context of climate adaptation & health in The Netherlands



Climate adaptation and the interrelation with other domains and agenda's



Health in all policies: Health, Housing, Habitat



The Heat Adaptation Menu



Development of Integral Heat Action plans



Challenges, succes factors and indicators of succes



One goal

To accelerate climate resilience in the Netherlands

3 principles

Smarter
knowledge is accessible
and applicable



More systemic
adaptation is mainstreamed
into all policies and developments



More inclusive
adaptation for and by all



15 key challenges
for adaptation

Water



- Well-protected against flooding
- Sponge cities
- Future-proof freshwater supply
- Good water quality

**Agriculture,
nature and the
environment**



- Climate resilient agriculture
- Climate resilient nature
- Well-protected hazardous industries

**People and
culture**



- Heatproof cities
- Staying healthy in times of climate change
- Well-protected cultural heritage

**Working and
living**



- Green climate-adaptive new developments
- Climate-resilient housing for all
- Green and healthy working landscapes
- Strong and resilient infrastructure
- Climate-adaptive waterways

5 priorities

1 To develop concrete adaptation targets



2 To increase accessibility and applicability of knowledge products



3 To increase attention to climate justice



4 To mainstream adaptation into all policies and implementation



5 To explore opportunities to expand adaptation finance

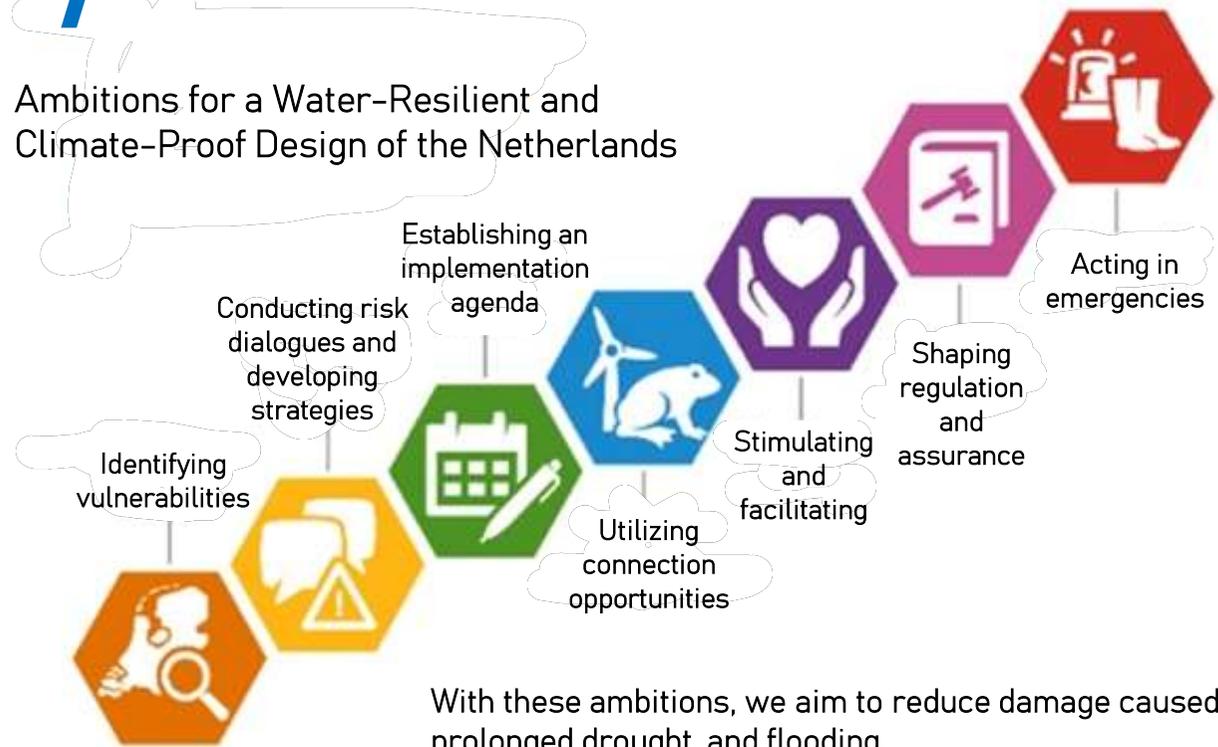


National Adaptation Strategie

Deltaplan Spatial Adaptation

7

Ambitions for a Water-Resilient and
Climate-Proof Design of the Netherlands



Deltaplan Ruimtelijke adaptatie

Gebiedsoverleggen en werkregio's Ruimtelijke adaptatie



Work regions
climate adaptation







De hittebestendige stad samenhang met andere domeinen / agenda's

The interrelation with other domains and agendas

Health

- Loneliness
- Aging population
- Air quality
- Mental health
- Obesity
- Physical activity

Green and blue

- Biodiversity
- Water storage

Buildings

- Energy transition

Public space and urban development

- Mobility and infrastructure
- Housing construction
- Economic development
- Networks
- Vulnerable neighborhoods

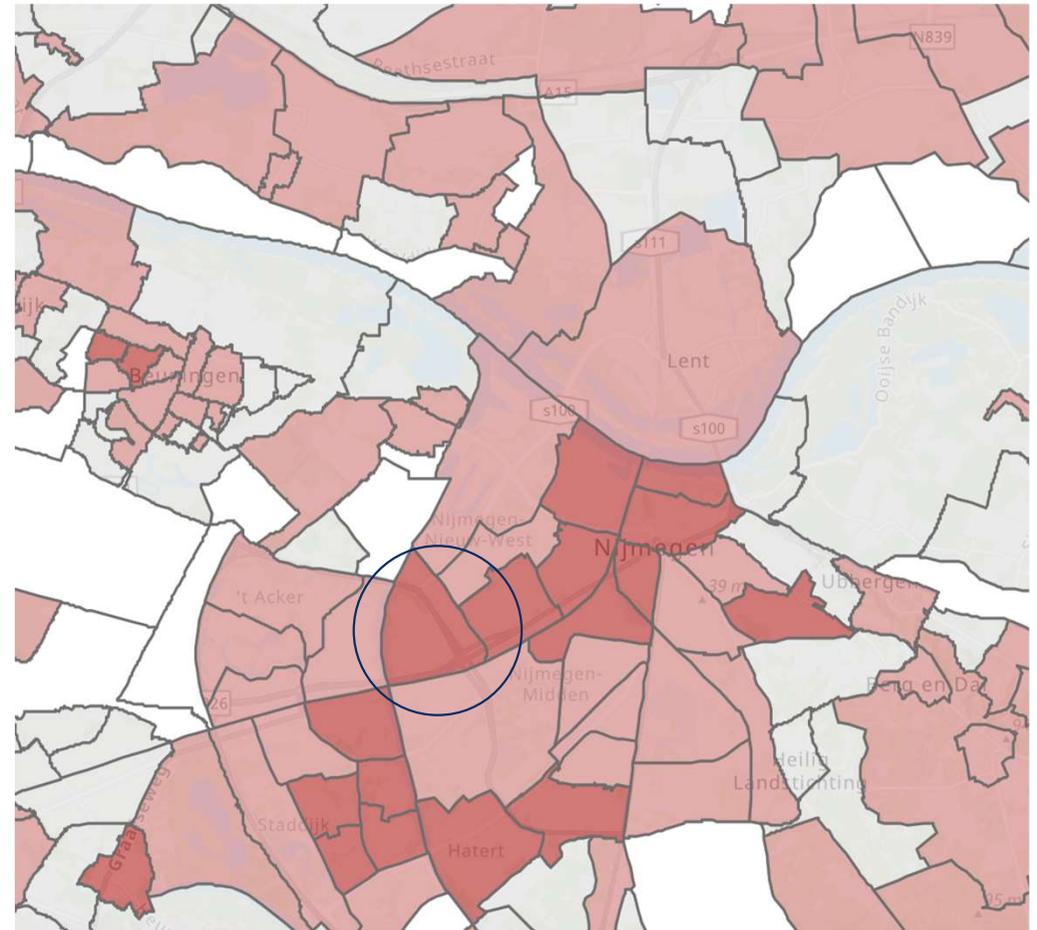
Heat adaptation is about
Health, Housing and Habitat



Heat risks are a combination of risk factors



This Habitat may look green, but combined with a typology of the **Housing**, 'frailty' and social economic data for **Health** and wellbeing this is one of the neighbourhoods of this municipality with high heat risks.

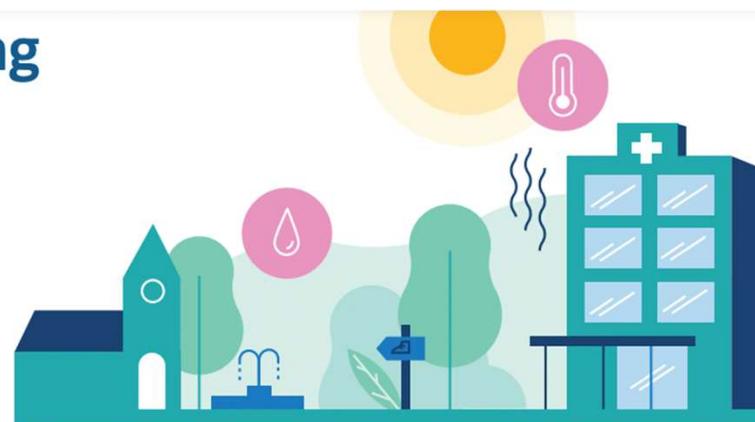


Menukaart Hitte in de gebouwde omgeving

Instructie

In dit document vind je de Menukaart voor Hitte in de gebouwde omgeving. Graag helpen wij je om deze Menukaart te gebruiken in je eigen organisatie. Tijdens een eerste overleg met je collega's kun je onderstaand schema gebruiken om te bepalen welke negatieve effecten van hitte jullie op willen lossen. Je bepaalt aan de hand van bestaande informatie, zoals de stresstest voor hitte en informatie van plaatselijke gezondheidsdiensten, welke effecten urgent zijn in jullie gebied.

Veel succes met het nemen van de eerste stappen richting een hitteproof gemeente!



Stap 1: Kruis aan welke negatieve effecten of problemen urgent zijn in jullie gebied

Lees meer op pagina 2 t/m 4



Gezondheid

- Door hitte treden levensbedreigende gezondheidsproblemen en oversterfte op
- Er is een toename in de duur en aantal van extreme hittegolven (KNMI Code Rood voor hitte)
- Door hitte treden aanvullende gezondheidsrisico's op, zoals een toename van huidkanker door UV-straling, meer doden door verdrinking en een toename in alcoholgebruik en daarmee samenhangend huiselijk geweld
- Door hitte ervaren mensen slaapproblemen tijdens warme nachten
- Door hitte is er sprake van een daling in de arbeidsproductiviteit



Gebouw

- Scholen, instellingen voor langdurige zorg (bijv. verpleeghuizen) en kinderopvang warmen te veel op, waardoor (kwetsbare) bewoners en gebruikers mogelijk gevaar lopen
- Het wooncomfort in gebouwen neemt af door hitte
- De koelingsvraag neemt toe
- Detailhandel en Horeca ondervinden een afnemende klandizie tijdens hete periodes



Gebied

- Bij hitte daalt de leefbaarheid in de stad
- De drinkwaterkwaliteit is in gevaar door opwarming van water in leiding tracés
- De watervraag neemt toe, terwijl de waterkwaliteit daalt
- Er is sprake van sociale overlast en agressie bij hitte
- Bij evenementen gedurende een hete periode raken mensen oververhit
- De waterkwaliteit van zwembadwater neemt af tijdens hete periodes

[Click here for the English version](#)

The Heat Adaptation Menu

16 heat risks identified

➤ Health: 4

➤ Housing: 5

➤ Habitat: 7

Focus:

Combination of risks in the neighbourhoods with the lowest social-economic status



Ministry of the Interior and
Kingdom Relations



Klimaatverbond
Nederland



TAUW

&flux



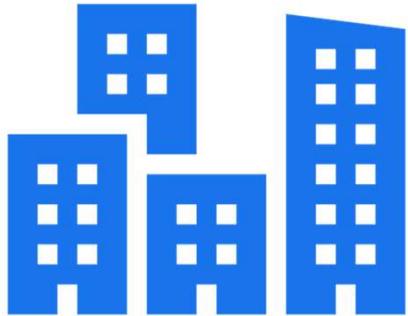
Example: Health

Risk:

Heat causes life-threatening health problems and excess mortality

Measures on a municipal level:

- Local Heat Action Plan
- A communication strategy to inform residents during a heat wave
- A Heat Protocol, focused on the Emergency Room and relevant hospital departments



Example: Housing

Risk:

The 'active' cooling demand in buildings and homes is increasing

Measures on a municipal level:

- Stimulate natural (summer night) ventilation and sun protection measures through subsidies.
- Give advice for the effective and healthy use of air conditioners.
- Construct homes and buildings in such a way that they can not only retain heat, but also dissipate it well (good heat/cold balance in insulation).



Example: Habitat

Risk:

Bridges and pavement suffer damage from heat

Measures on a municipal level:

- Spray bridges during hot periods.
- Use heat - resistant materials and adapt design guidelines accordingly:
- Change asphalt mixture by incorporating harder bitumen or polymers.
- Adding white stones to asphalt or concrete paving stones, which reflects more radiation.
- Create shadow on the road surface.



Development of Integral Heat Action Plans

The process for every municipality

Phase 1:

1. Organise a Team of 3 colleagues working in the domains Health- Housing- Habitat
2. Make an Assessment of the current level of heat resilience actions in the municipality
3. Make an assessment on potential municipal programmes you may connect with
4. Identify colleagues and local organisations to invite for the kick off session

The kick-off session (Phase 2)



The kick-off session

First half:

- Different games and interviews with participants to get acquainted with their work and for them to learn more about the many different aspects of heat risks.
- Sciencebased approach: playing, movement and humor makes you learn a lot better – No PowerPoint

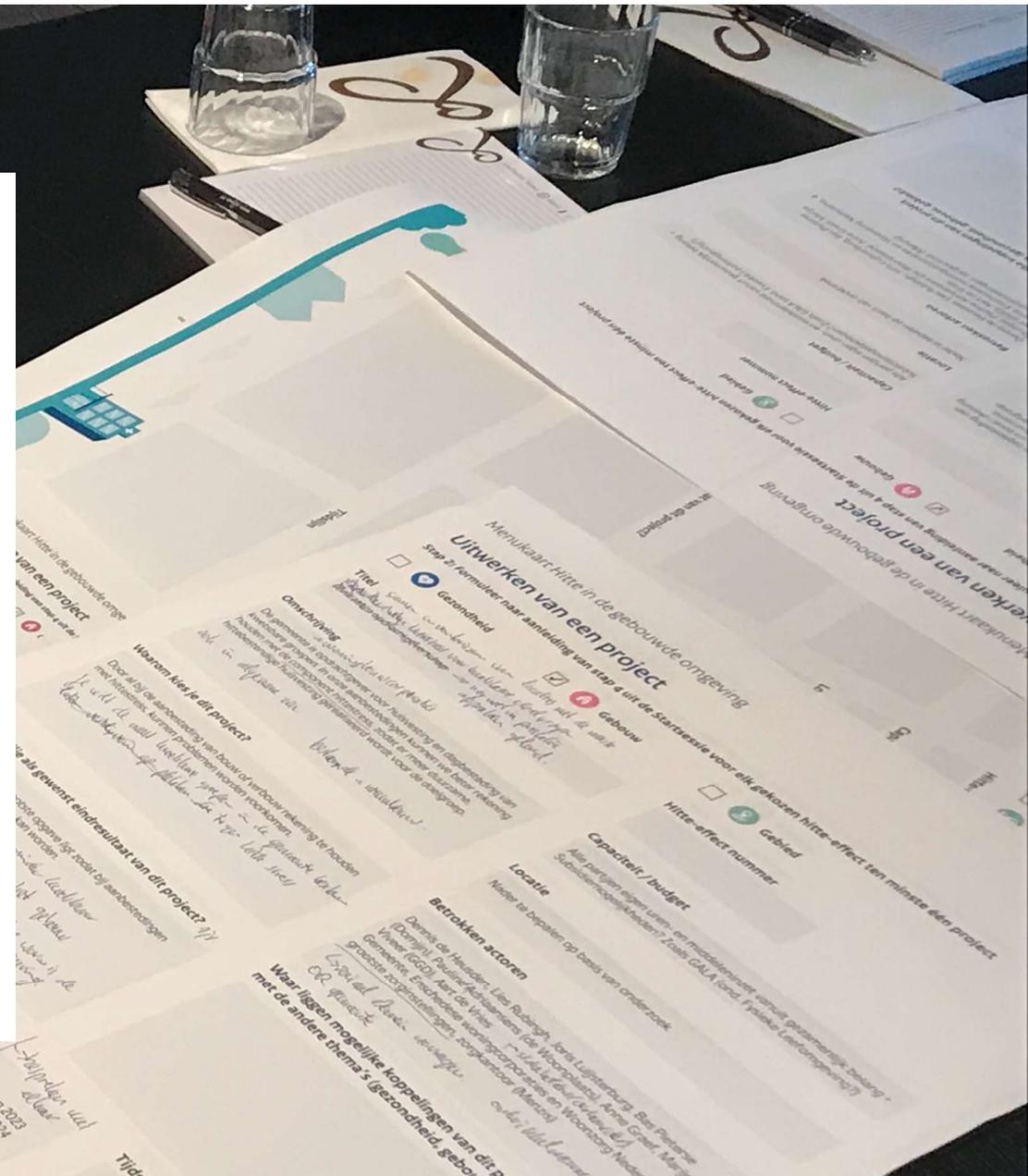


Second half:

- Participants prioritise heat risks they want to start working on within Health – Housing – Habitat
- Discussion about these choices.
- In smaller groups working on first outlines of the plan of action for the prioritised heat risks

The 2nd session (Phase 3)

- Further elaboration and concretisation of projects on the chosen priorities
- Goal: Integrated Action plan for Heat health, Heat Housing and Heat Habitat
- Agreements on commitment with local partners



Current state of affairs

- In 2025 3 provinces (out of 12) have adopted the Heat Adaptation Menu.
- By the end of 2025 60 municipalities have worked on an Integral Heat Action Plan.

And also..

- Since 2019 80-90 municipalities (out of 340) have a local Heat Health Action Plan
- Since 2021 There is a National Heat group of 35 social housing corporations
- Since 2023 The Community of Practice Heat with 50 municipalities and provinces stimulates knowledge and experience sharing
- A national 'multi layer' stress test for heat risks will be implemented
- For the first time we organized Heat Action Day on the 2nd of June
- The government has developed a national action agenda for heat risks



Challenges, success factors and indicators of success

Challenges

- Heat belongs to everyone and no one.
- Important potential partners are busy with even greater social challenges.
- Collaboration is not a given.
- Finding synergy with ongoing programs takes time and extra effort.
- Government funding for heat adaptation is not structurally available.

Challenges, succes factors and indicators of succes

Succes factors

- Innovation and initiatives starts bottom-up
- A growing network of organisations, government bodies and professionals who feel the urgency and want to get involved
- The persistent wins..

Challenges, succes factors and indicators of succes

Indicators for succes

- Number of municipalities with a Integral Heat Acation Plan and involvement of domains outside of public health & healthcare
- Number of implemented measures / interventions in the domains Health, Housing and Habitat
- Reduction of heat related incidents, hospital admissions and deaths

Thank you
for your
attention!

