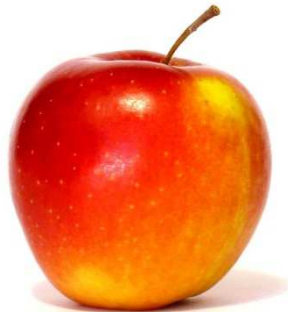




Ministerie van Verkeer en Waterstaat



# Health effects of infrastructure

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# Health effects of infrastructure

- Where did we start?
- What to do with health effects related to infrastructure?
- GES method
- Conclusions





## Where did we start?

- Procedure infrastructure
- Report on environmental effects (MER-report)
- Committee of the MER
- Instructions & advice

New:  
include health effects in the MER-report





# What to do with health effects related to infrastructure?



- Purpose: to give insight in health effects of different road alternatives
- Advice Research centre
- Methods health effects  
*Daly & GES*
- Scope of studies
- Based on existing research

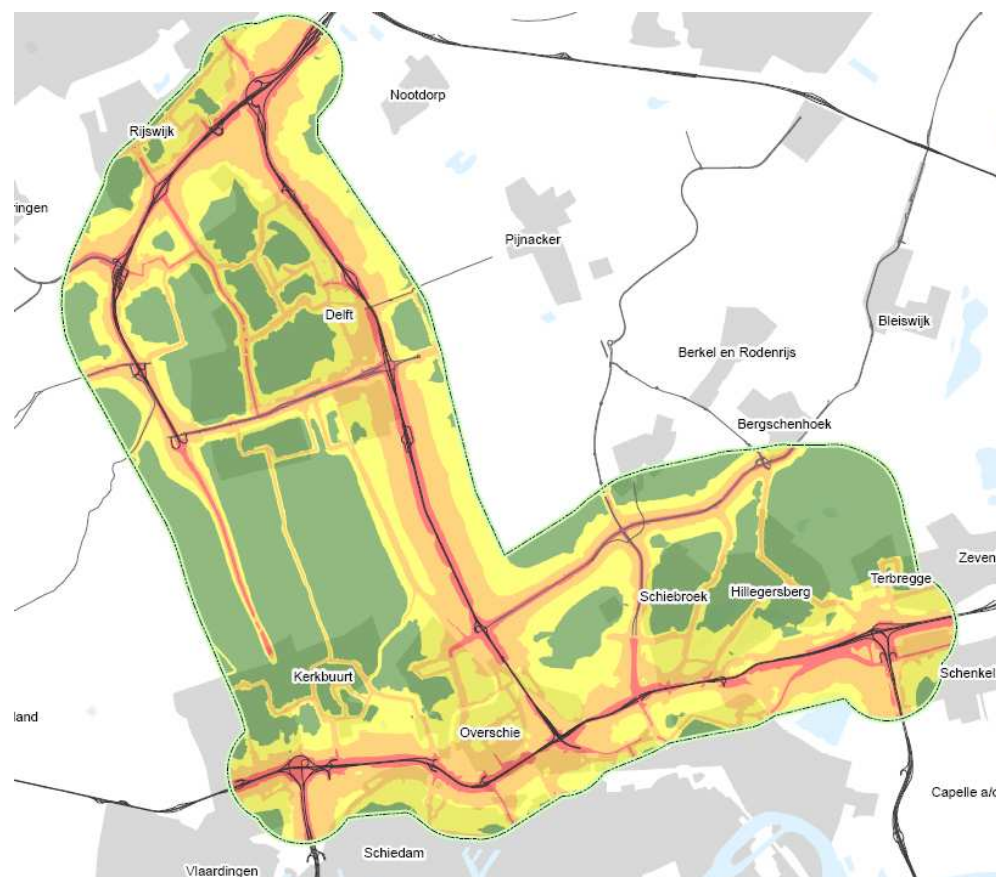


## Ges Method

GES-score*	Air quality	Noise		External risk	
	Concentratie	L <sub>den</sub>	Ernstige hinder (%)	Plaatsgebonden risico	Groeps risico**
0 very good		< 43	0	<10 <sup>-8</sup>	nee
1		43 – 48	0 - 3		
2	< 20	48 – 53	3 - 5	10 <sup>-8</sup> – 10 <sup>-7</sup>	nee
3	20 – 30				
4		53 – 58	5 - 9	10 <sup>-7</sup> – 10 <sup>-6</sup>	nee
5	30 – 40	58 – 63	9 - 14		
6	40 – 50	63 – 68	14 - 21	>10 <sup>-6</sup>	ja
7	50 – 65	68 – 73	21 - 31		
8 very bad	>= 65	>= 73	>= 31		



## GES method





## GES Method

GES	db	0	1a	1b	1c	2a	2b
0	43	33.080	1.640	1.670	870	-4.110	-2.370
1	48	105.370	6.190	6.180	6.570	11.330	11.420
2	53	127.110	-1.830	-1.990	-1.750	-2.010	-3.490
4	58	52810	-2.980	-2.920	-3.130	-3.500	-3.330
5	63	18.860	-2.920	-2.870	-2.470	-1.690	-2.280
6	68	1.000	-60	-30	-60	10	50
7	73	70	-30	-20	-20	-10	-10
8	>73	0	0	0	0	10	10
<b>total</b>		338.310	0	0	0	0	0



## Conclusions

- More and more attention for health effects
- GES method is useful in process decision making
- Challenge to integrate fields of health and transport