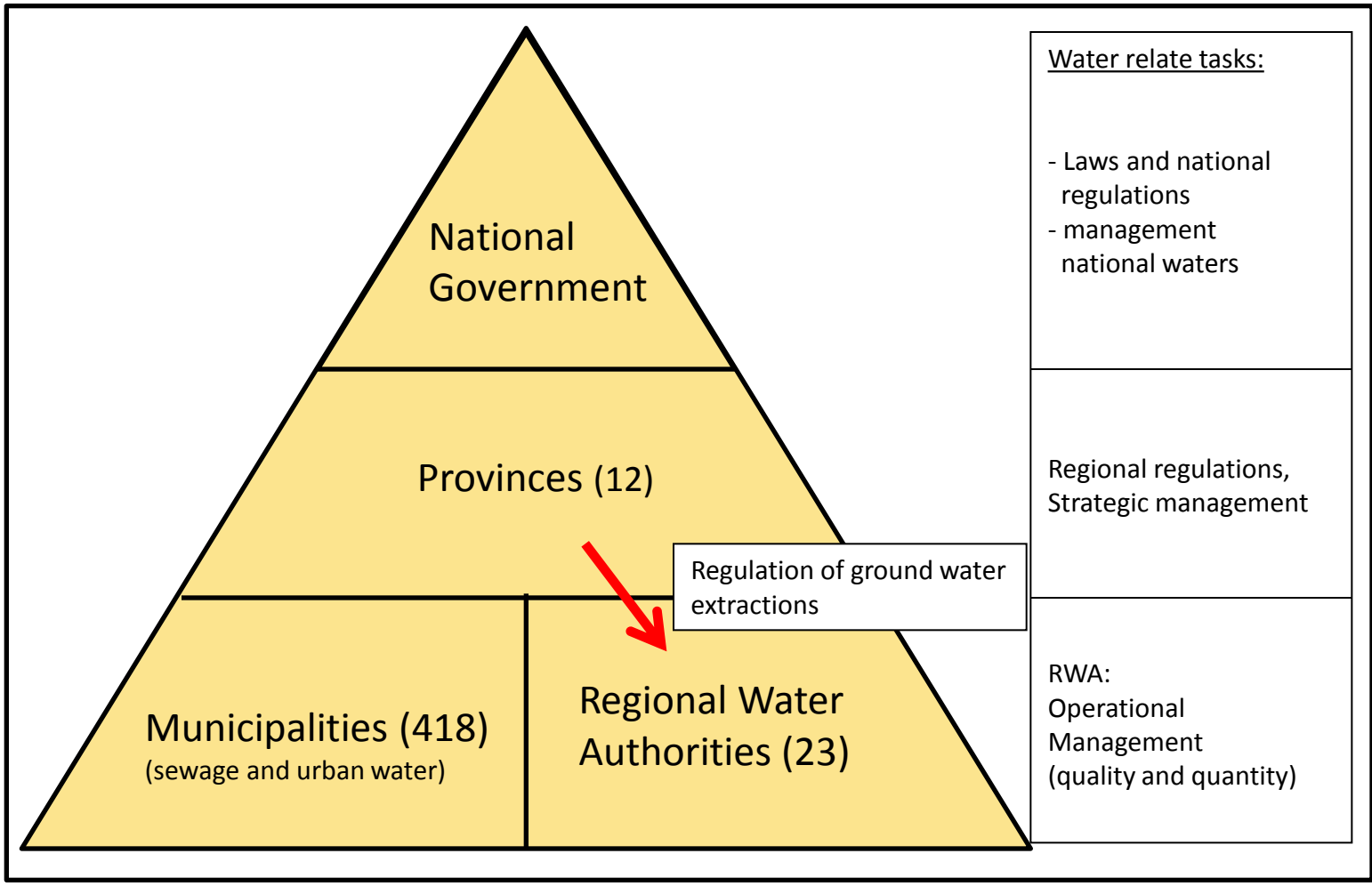
Regulations for groundwater extraction in the Netherlands

pre-interreg meeting
29,30 January 2015

by: Jan den Besten
Waterschap Hunze en Aa's

Governmental pyramid in the Netherlands

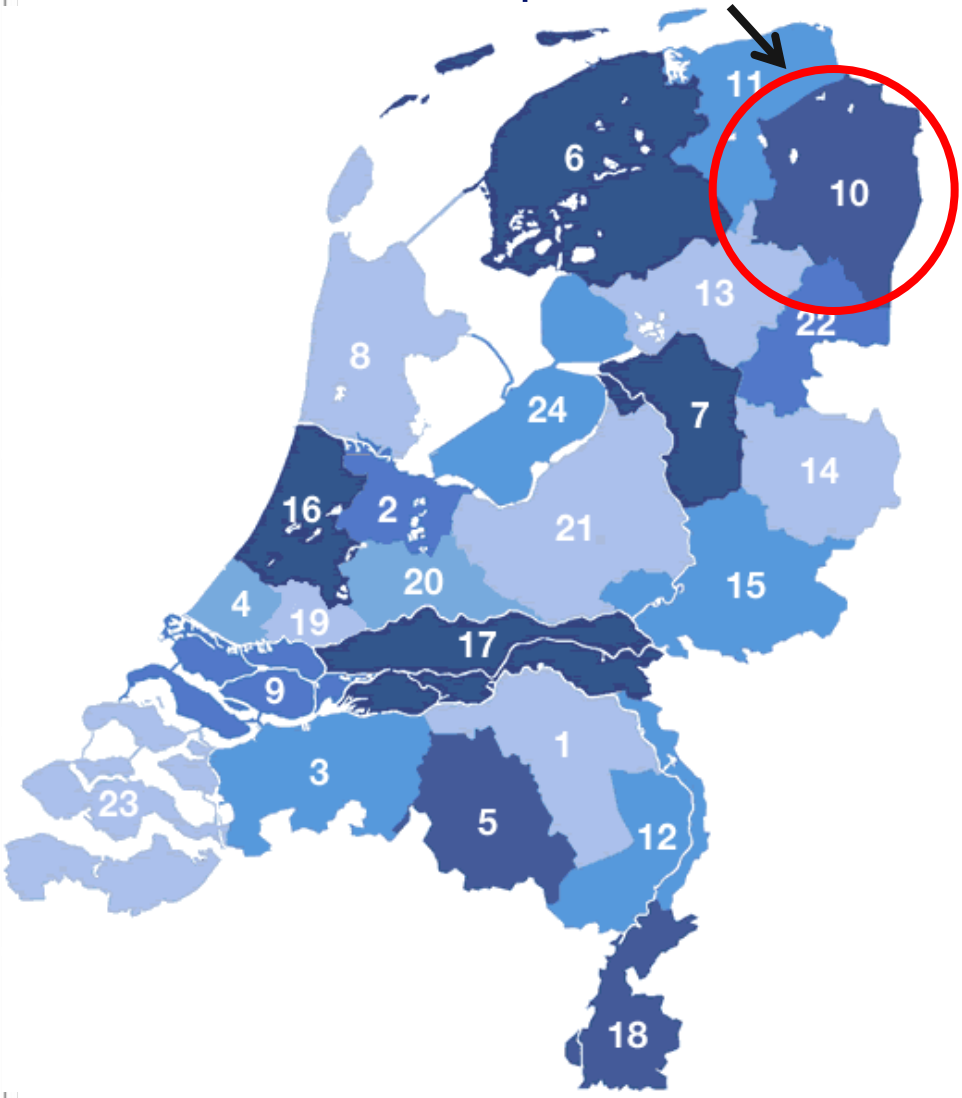


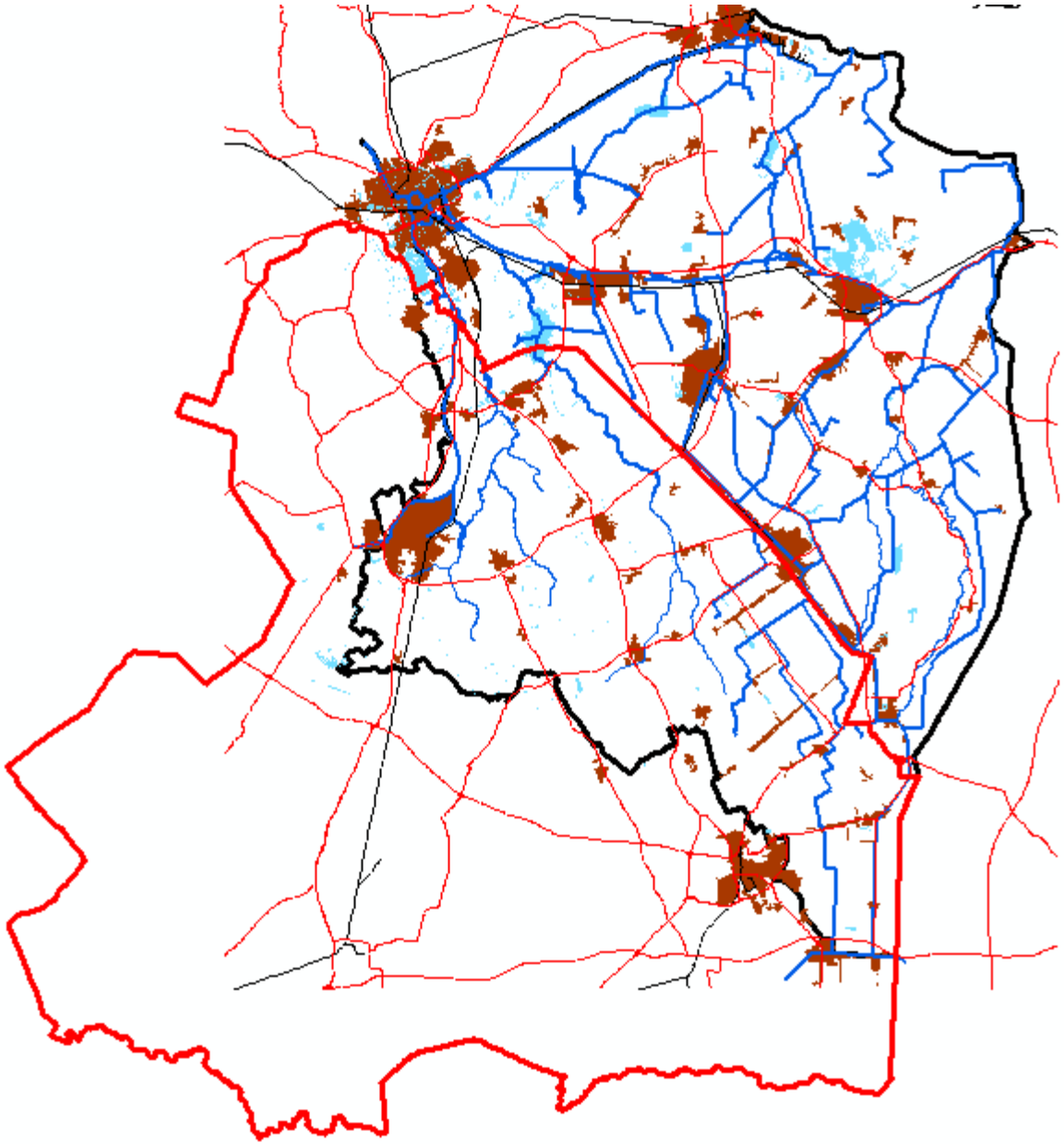
Province of Drenthe

Map of provences

Map of Waterschappen

Waterschap Hunze en Aa's

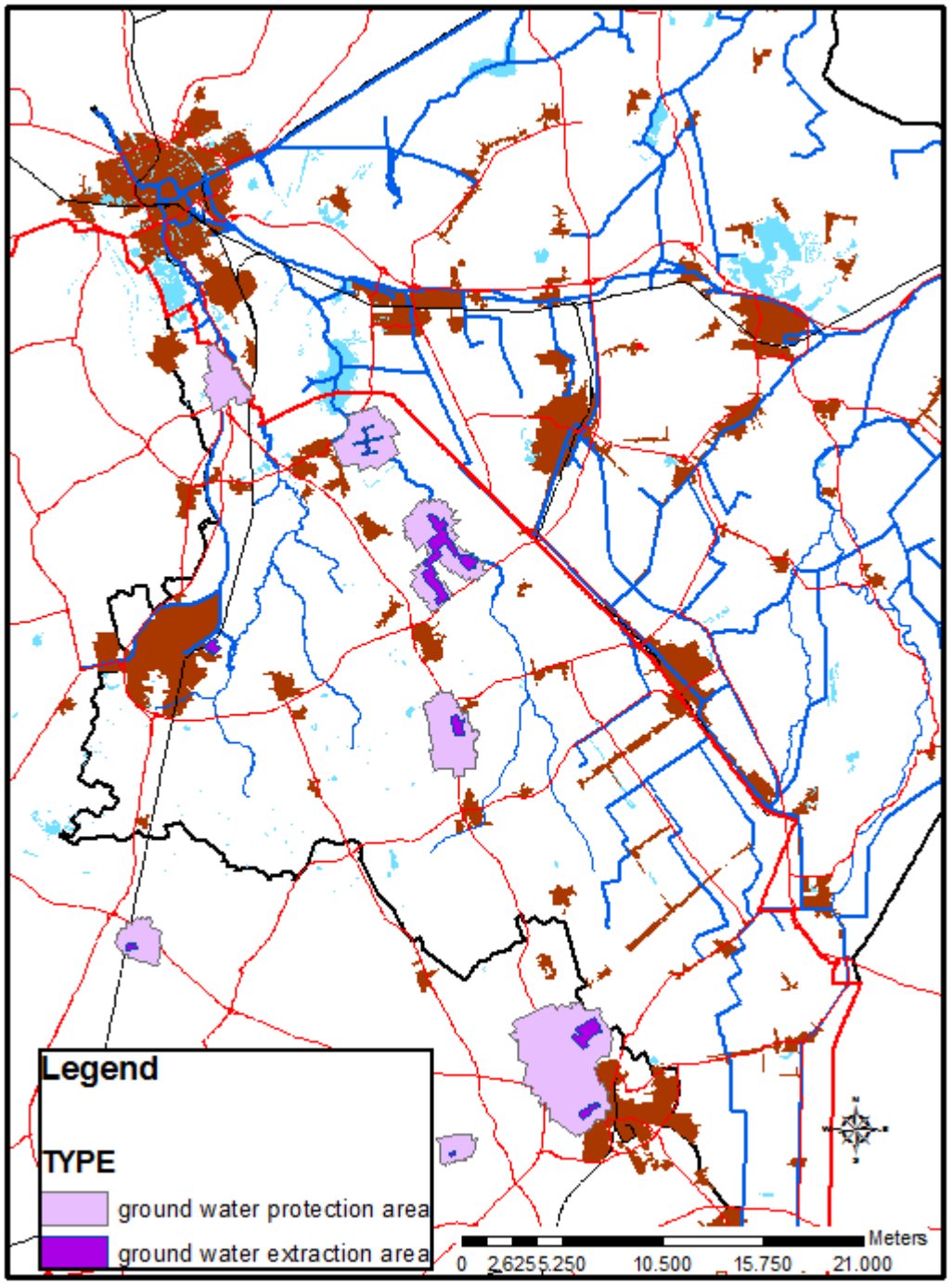




Province of Drenthe

and

Waterschap Hunze en Aa’s



Province:

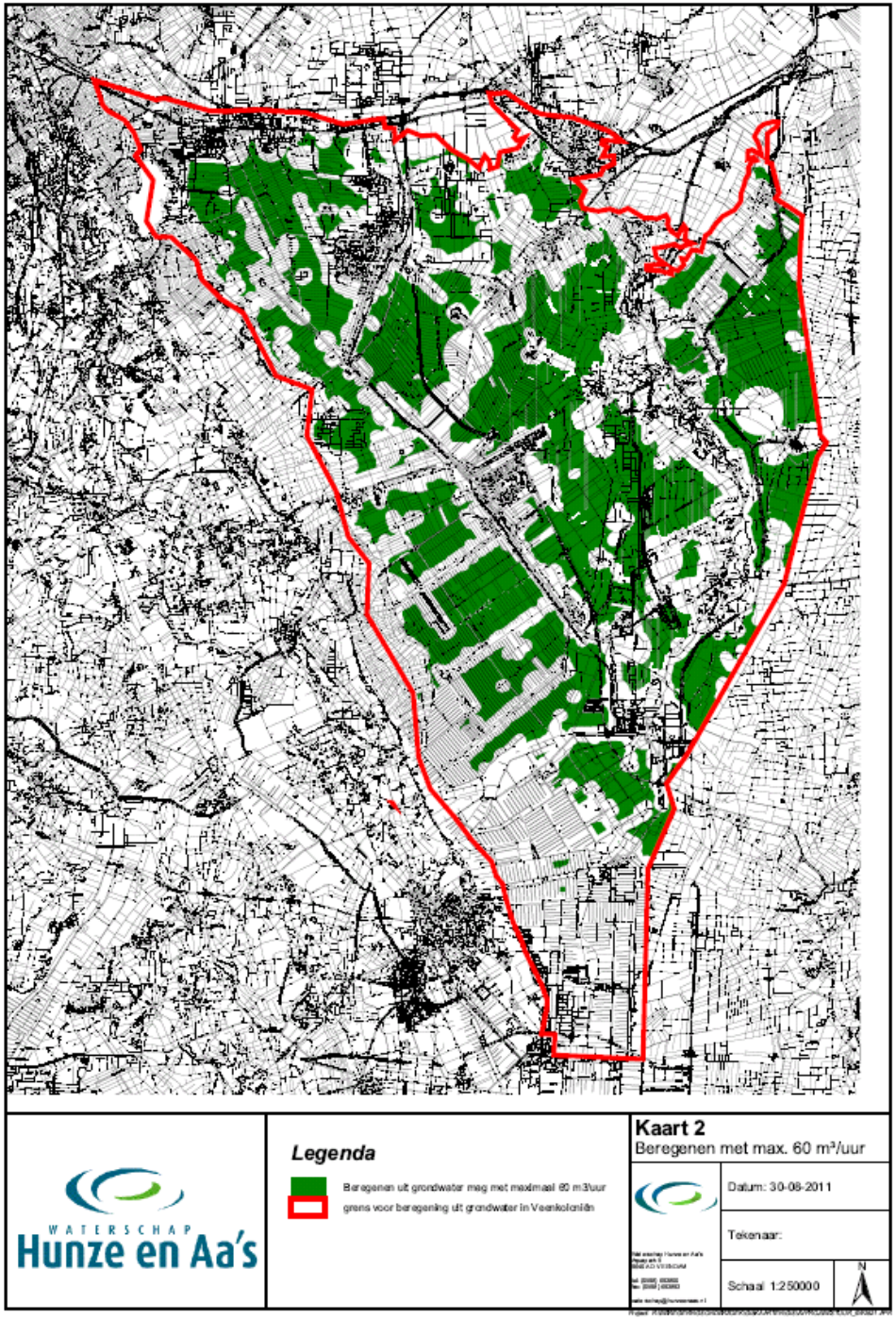
permits for the “big” ground water extractions

(Mainly for industries and drinking water companies)

Waterschap (since 2007):

Permits for other ground water extractions

(mainly for farmers)

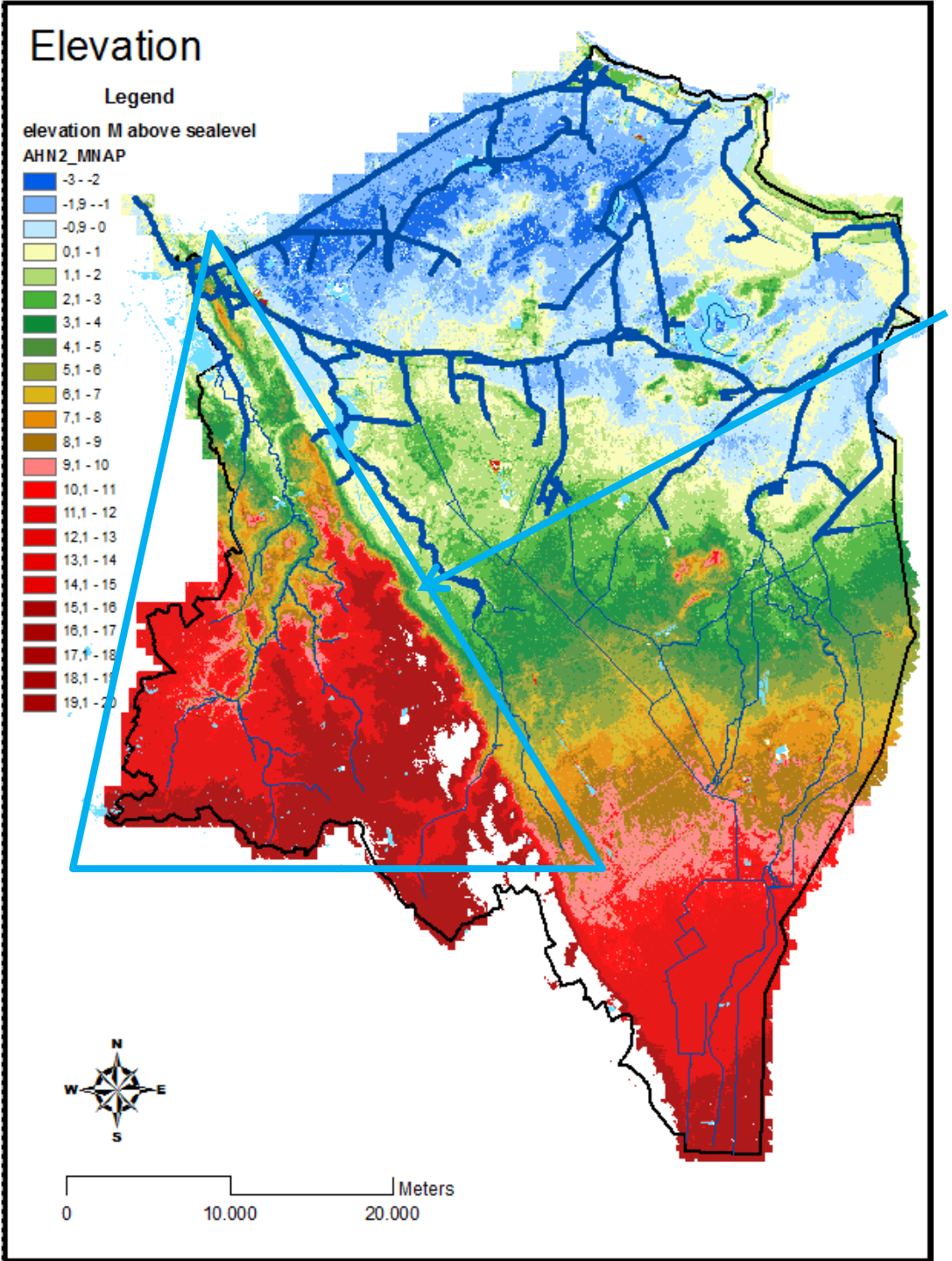


WATERSCHAP
Hunze en Aa's

Area where farmers are allowed to extract ground water

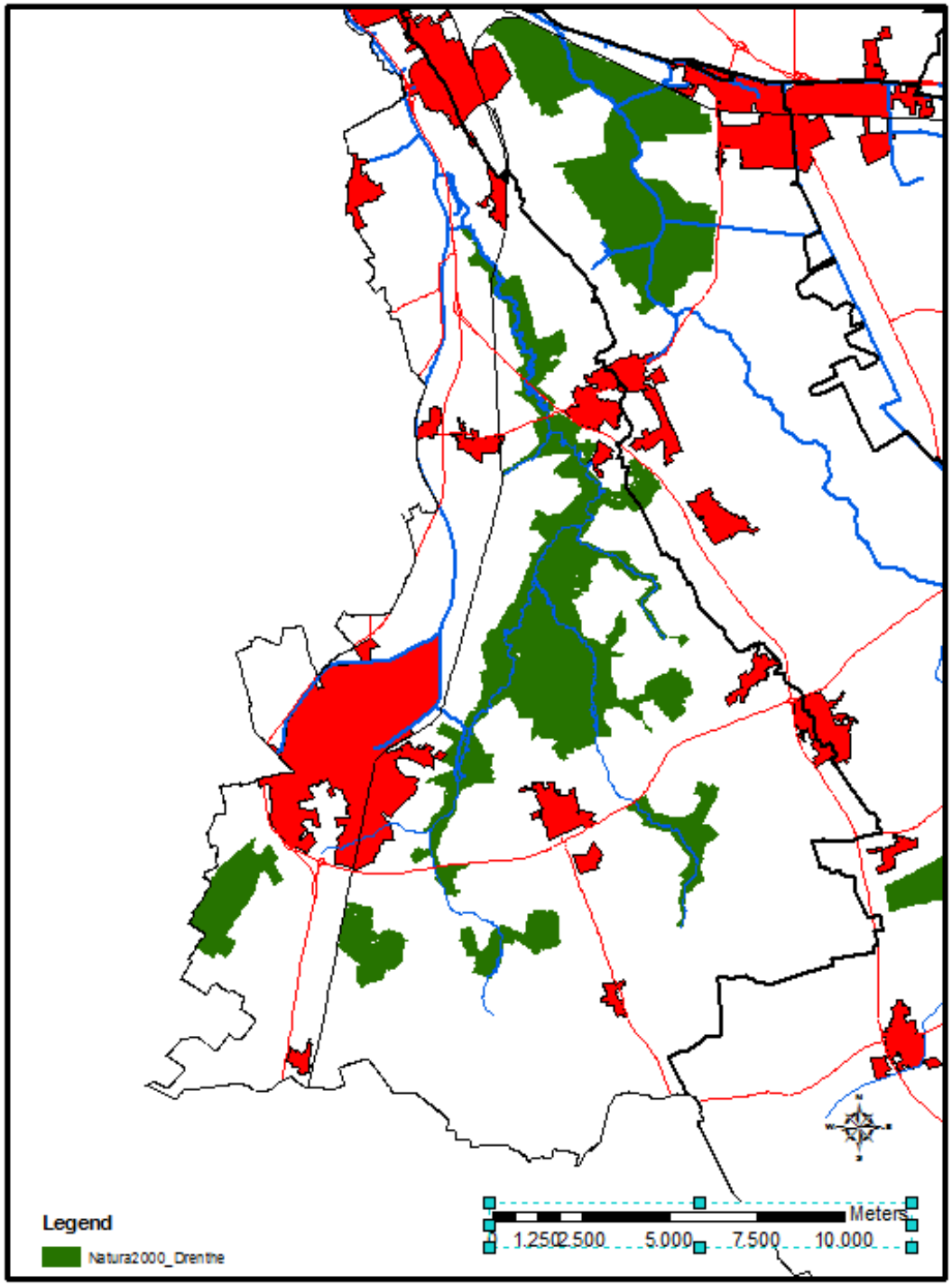
under certain condition described in general rules in the "Keur*" of the Waterboard

*"Keur"= legal rules & regulations of a waterboard

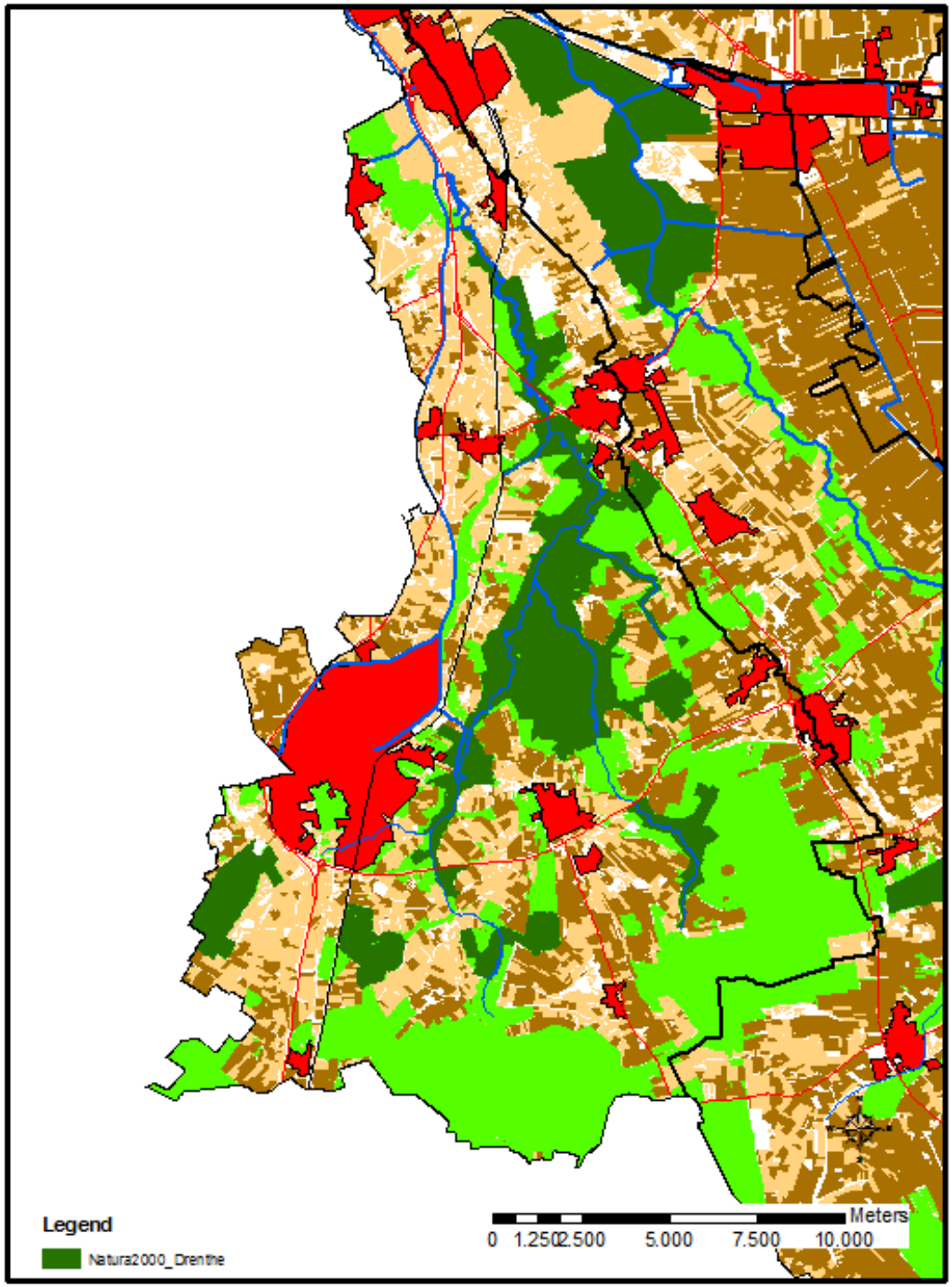


WATERSCHAP Hunze en Aa's

Catchment area of the Drentse Aa



Natura 2000 area Drentse Aa



WATERSCHAP Hunze en Aa's

Challenge:

To make the catchment climate proof for:

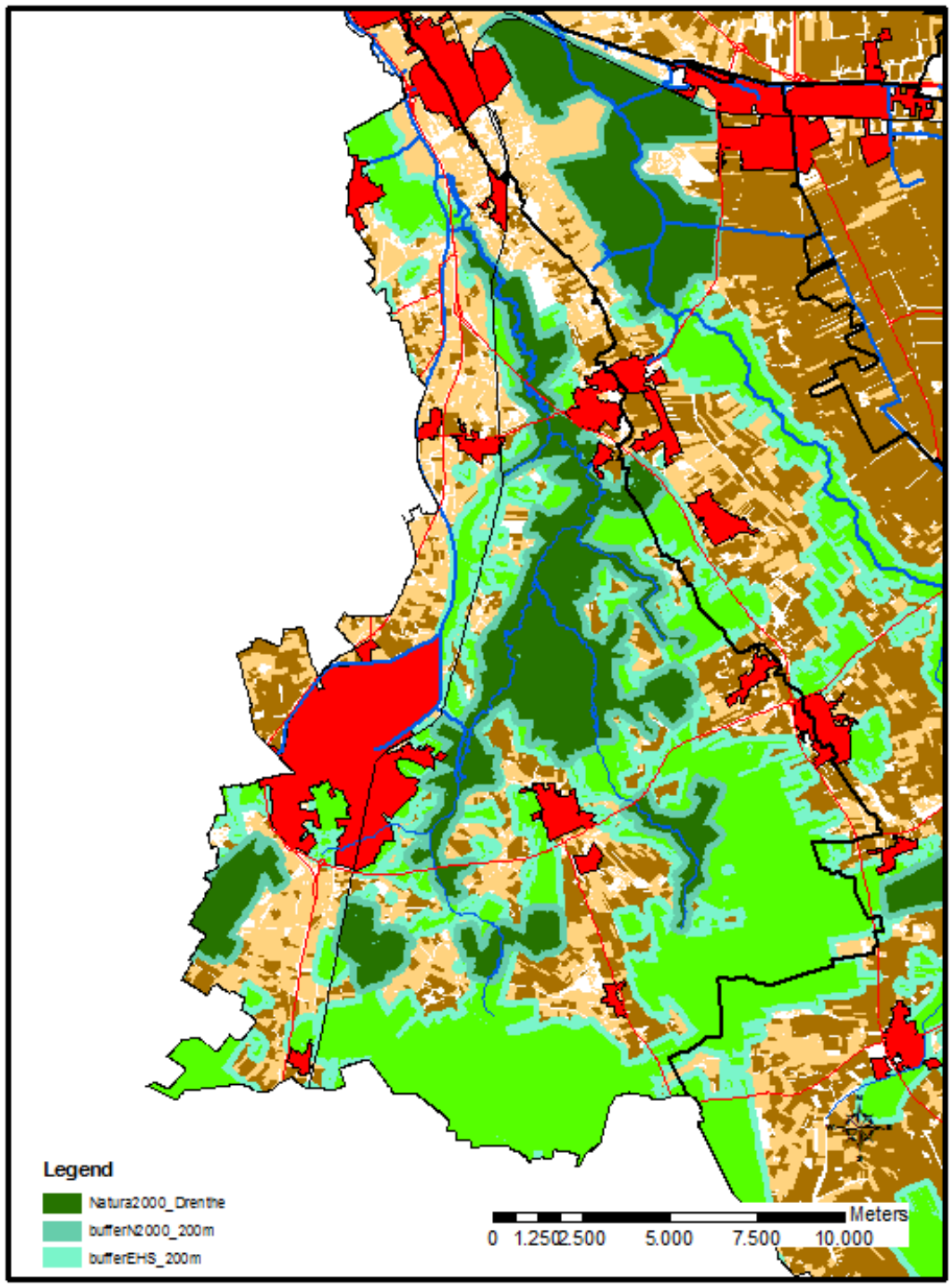
- Nature

and for

- Farmers

idea:

use bufferzones around nature



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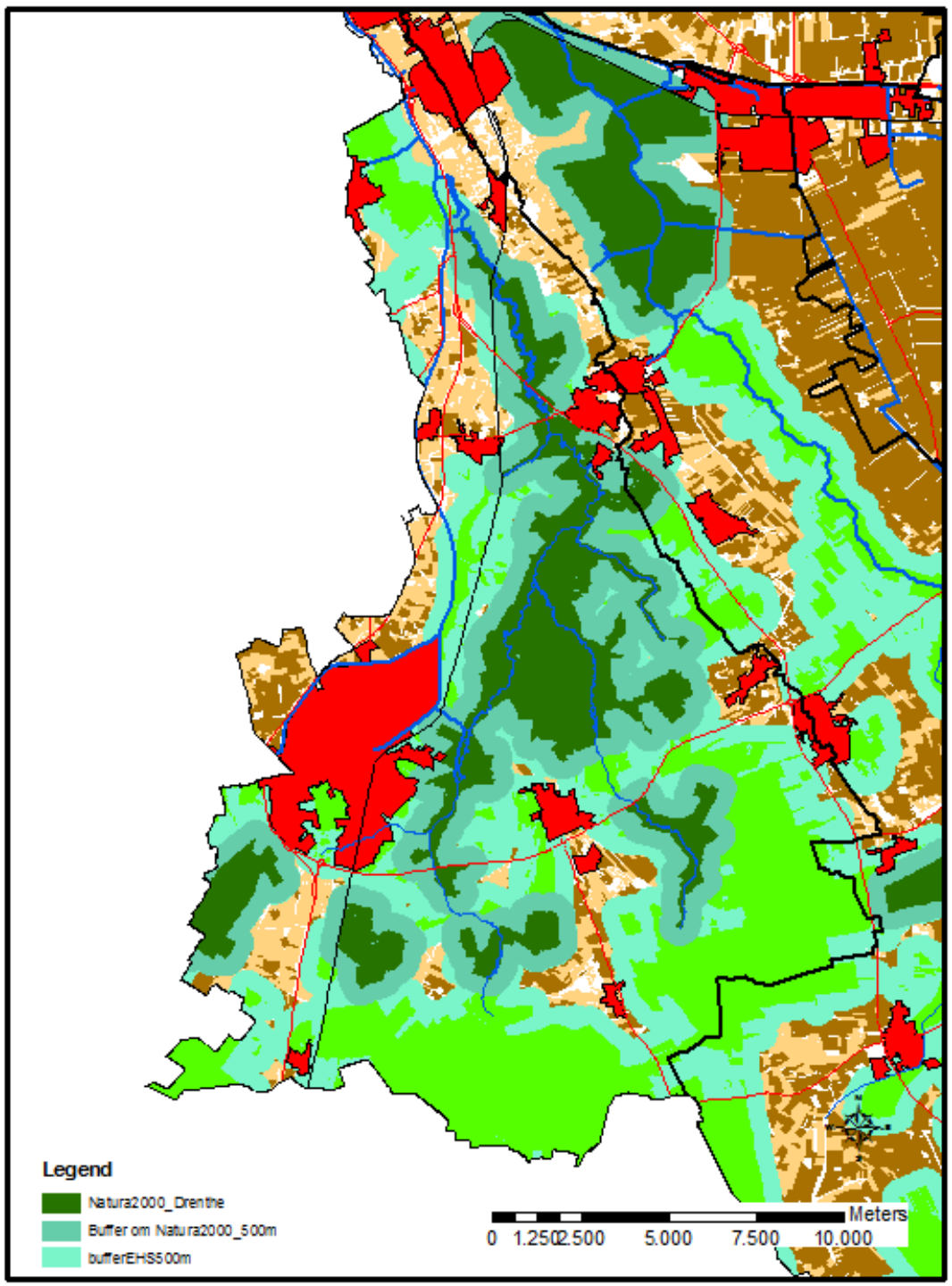
Indication of

buffer zones around nature

(zone of 200 m)

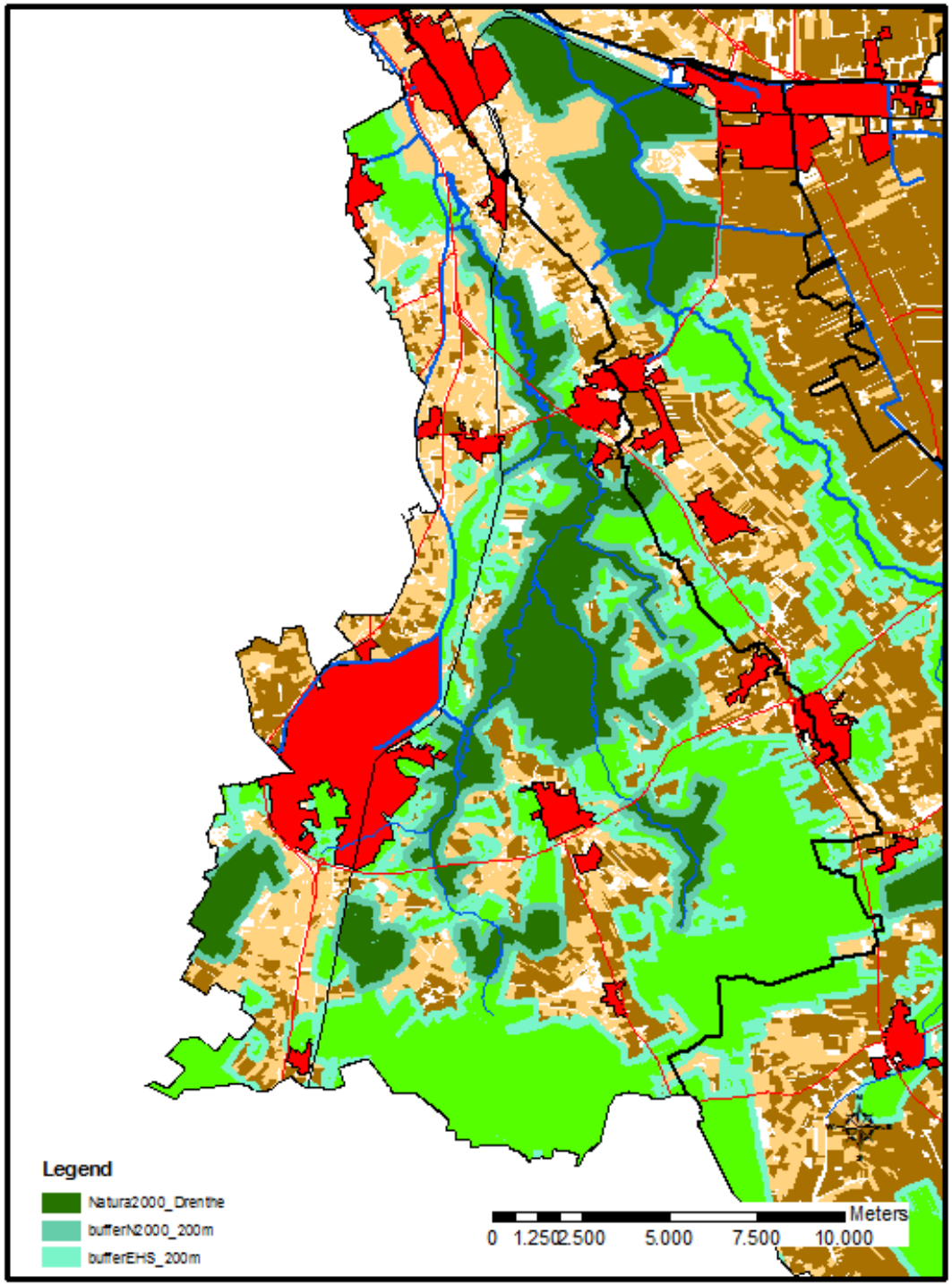


WATERSCHAP Hunze en Aa's

Indication of

buffer zones around nature

(zone of 500 m)



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Project idea:

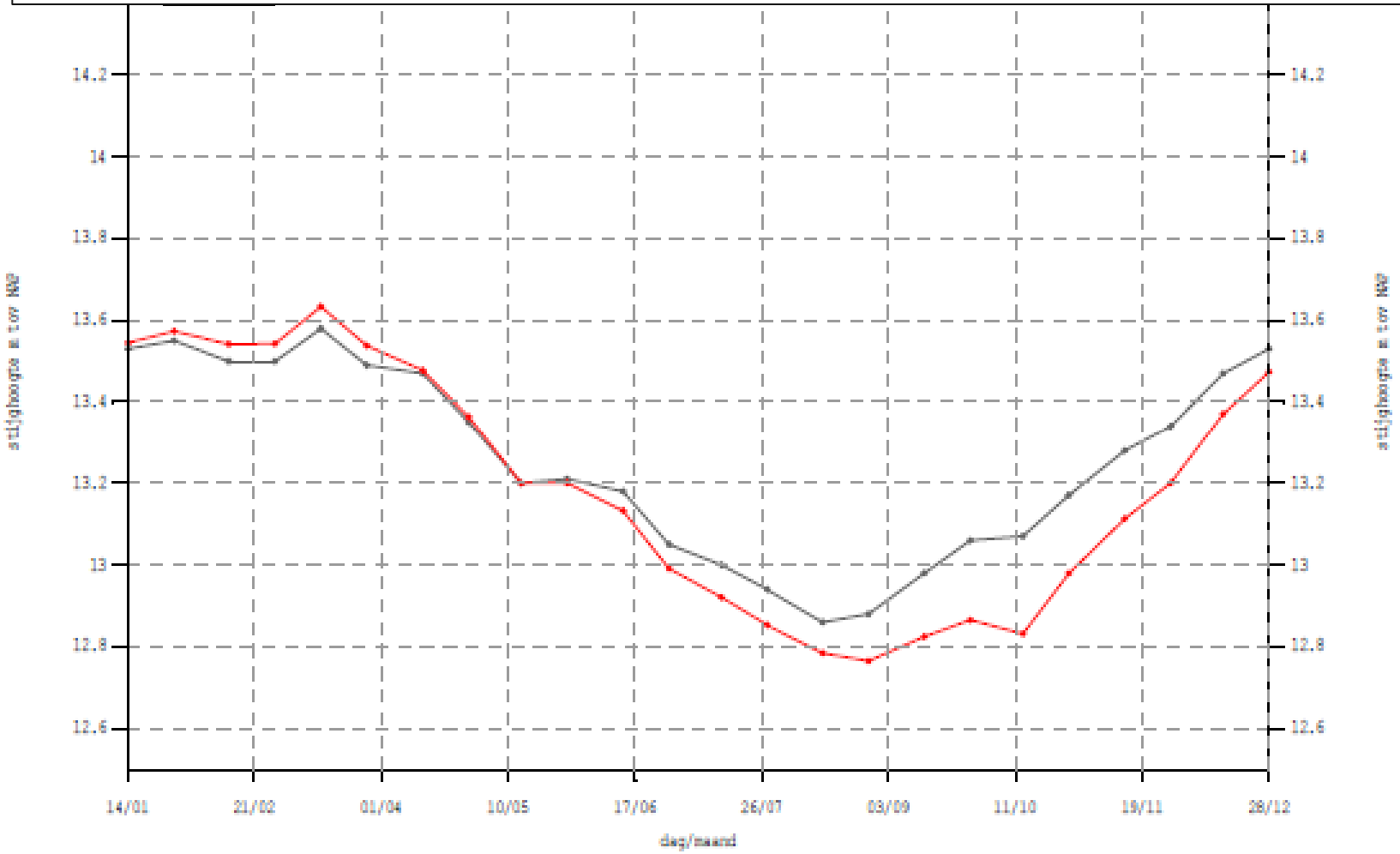
to develop a climate proof Drentse Aa catchment area, with:

- Ground water extraction areas for farmers, combined with water conservation (what type?)
- Buffer zones around Nature 2000 area and other nature (what width?)

Thank you

Groundwaterlevel change due to climate change

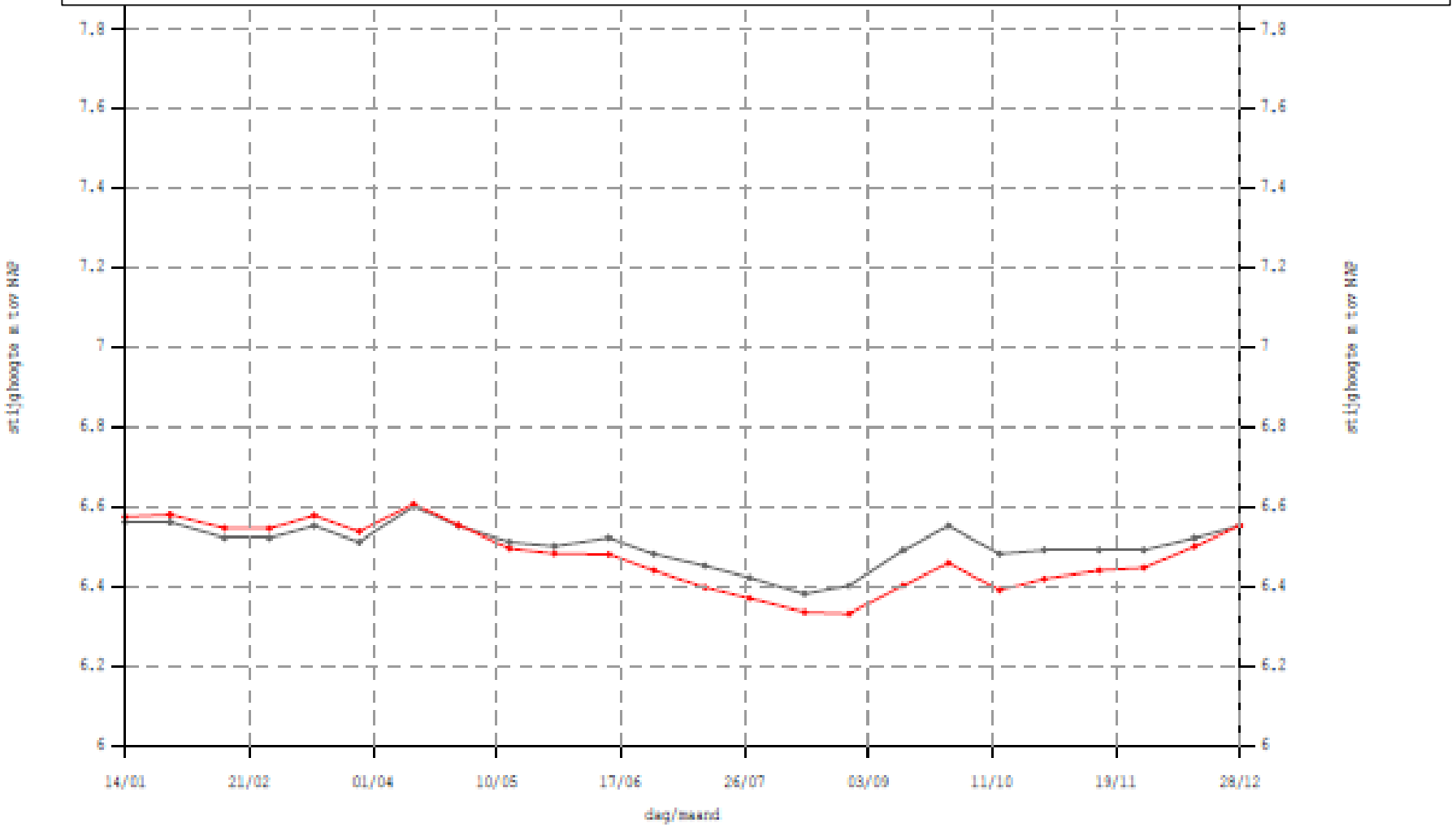
(black= present; red= W+)



Figuur b4.15 Berekende regimecurves B17B0175 huidige situatie (zwart) en klimaatscenario W+ (rood)

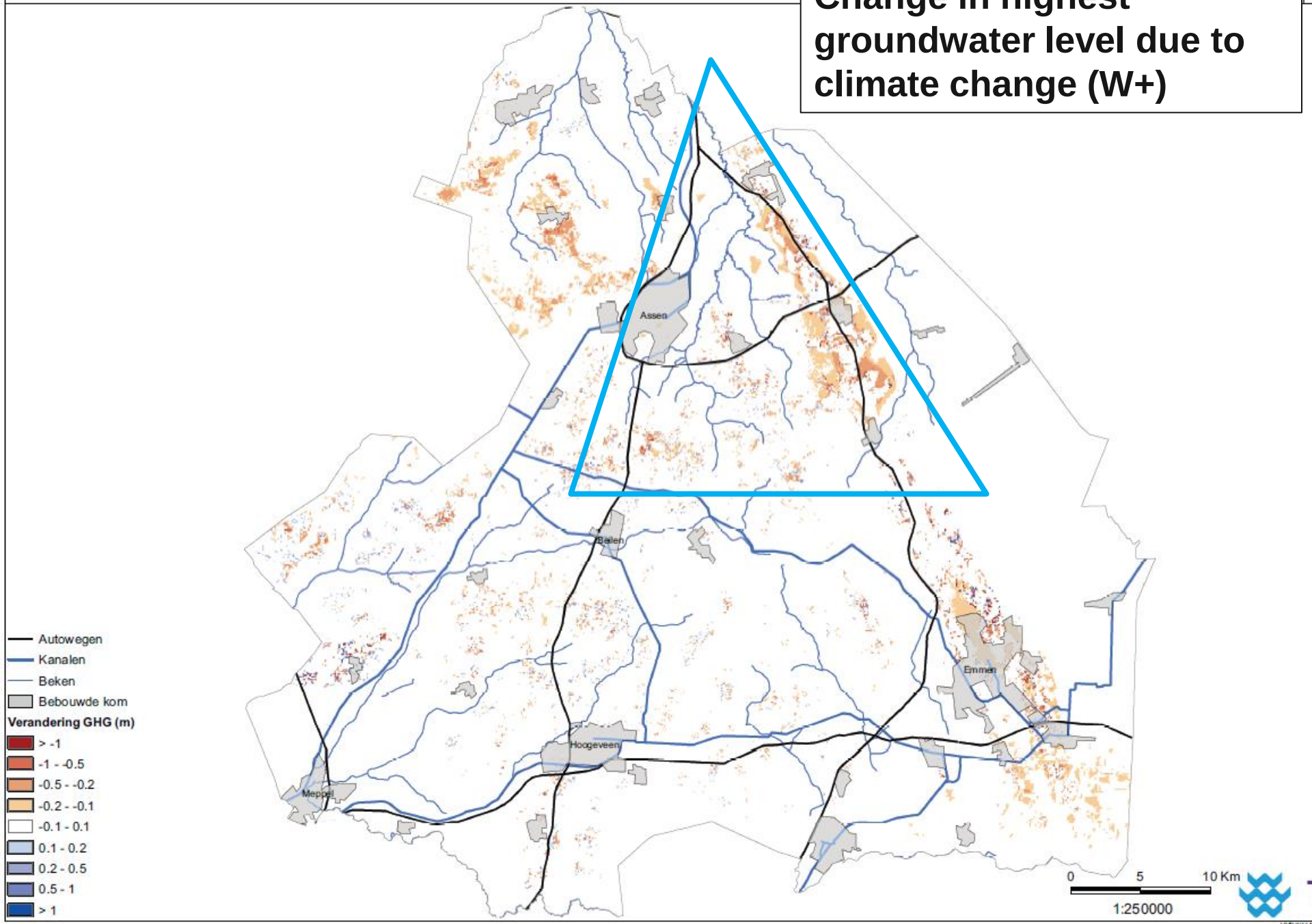
Groundwaterlevel change due to climate change

(black= present; red= W+)

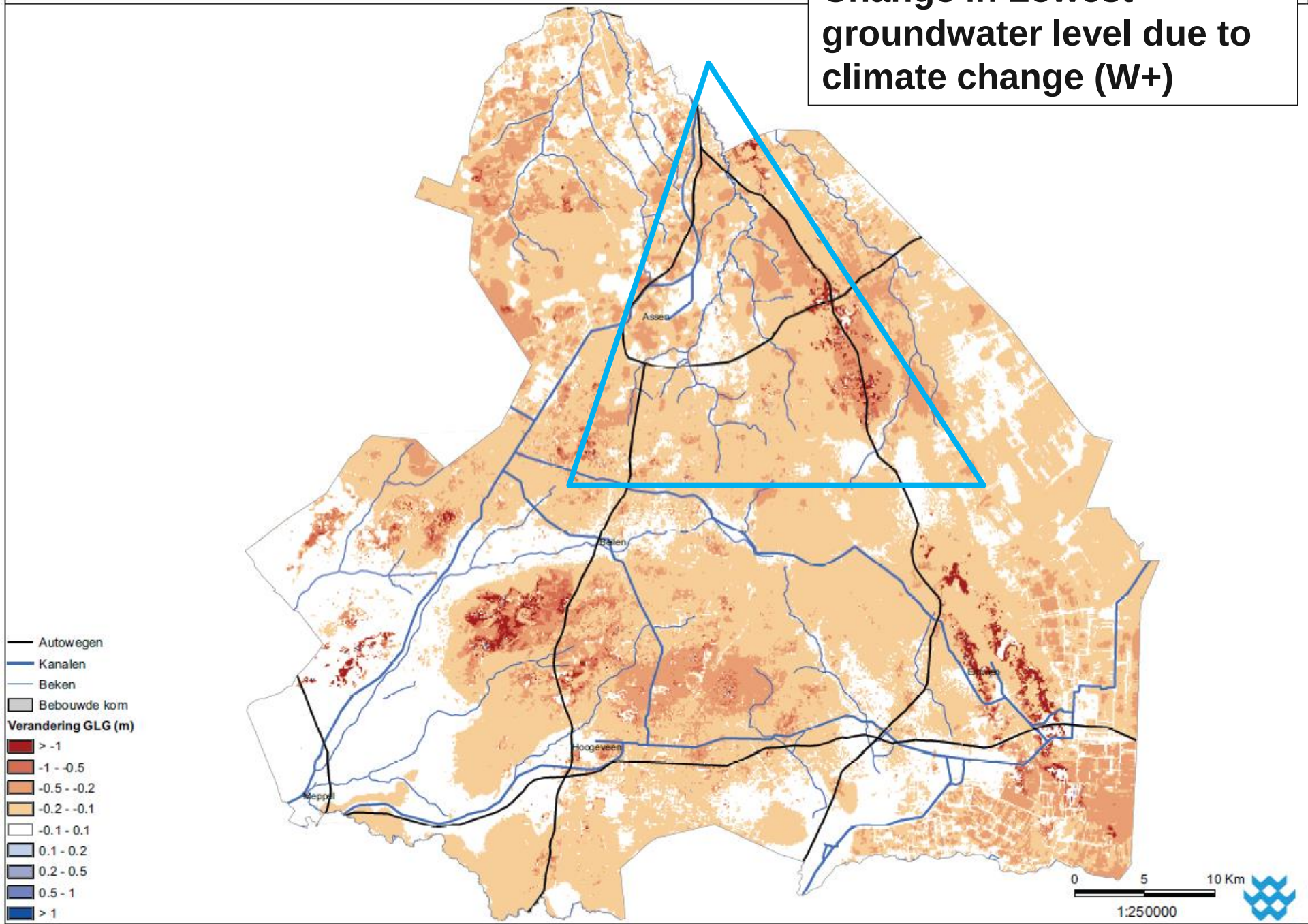


Figuur b4.16 Berekende regimecurves B17E0181 huidige situatie (zwart) en klimaatscenario W+ (rood)

Change in highest groundwater level due to climate change (W+)



Change in Lowest groundwater level due to climate change (W+)



Changes in lowest groundwaterlevel by filling ditches in nature areas