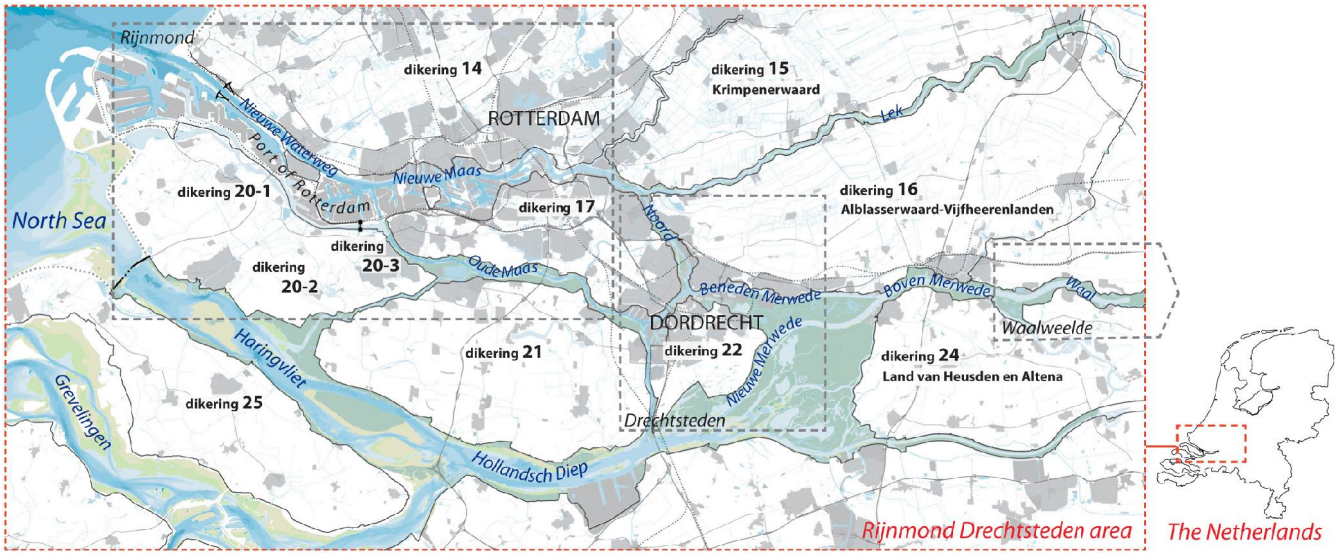
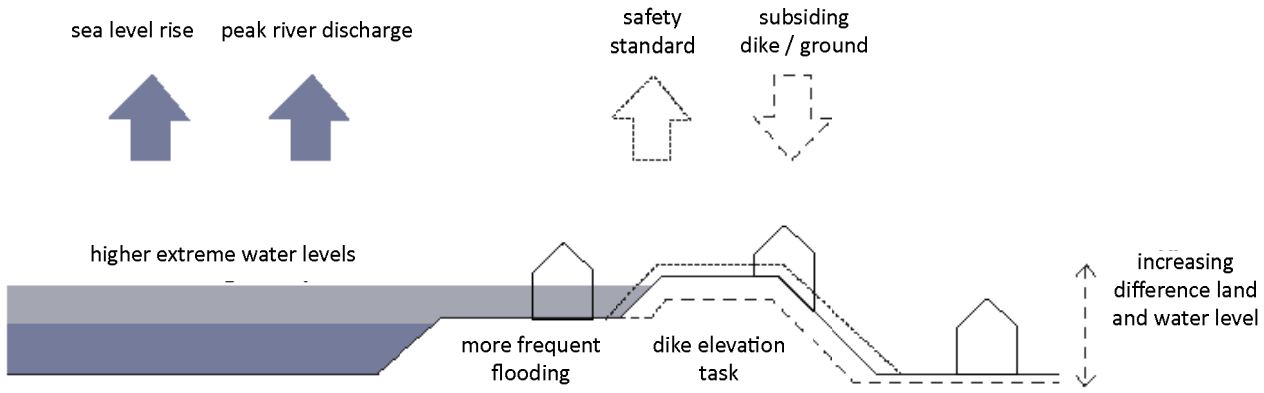
Improving the allocation of flood-risk interventions from a spatial quality perspective

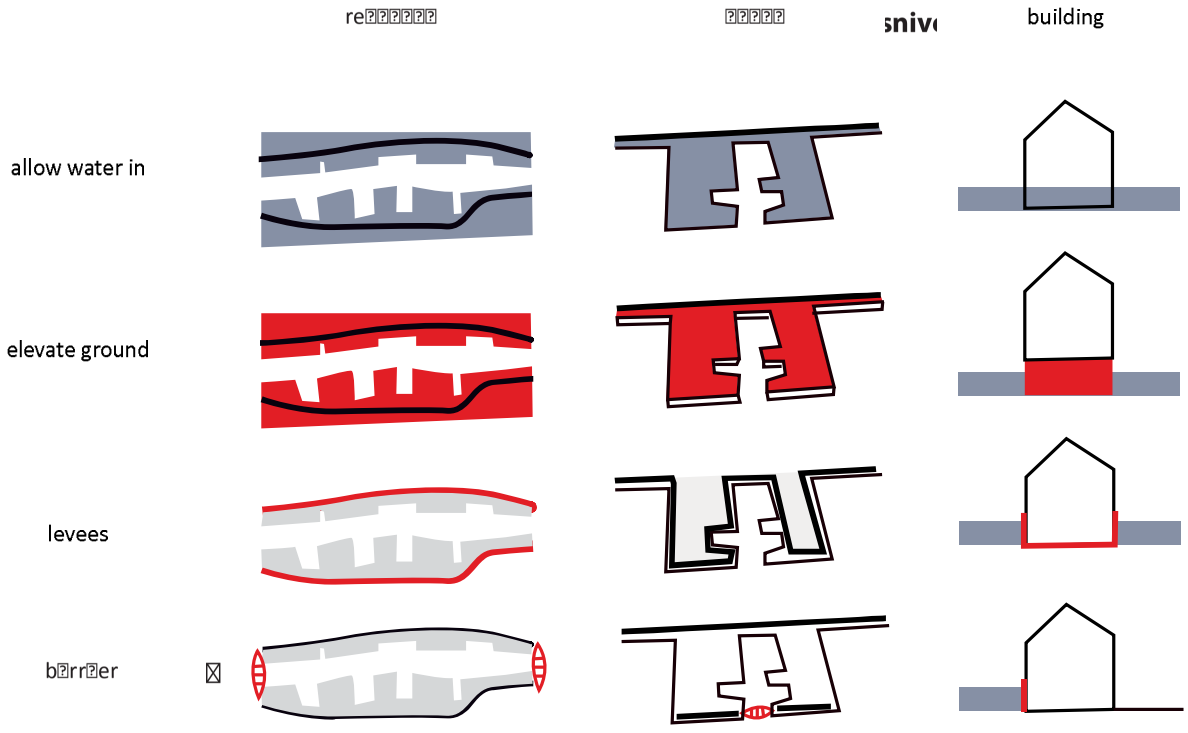
Anne Loes Nillesen 24 September 2014



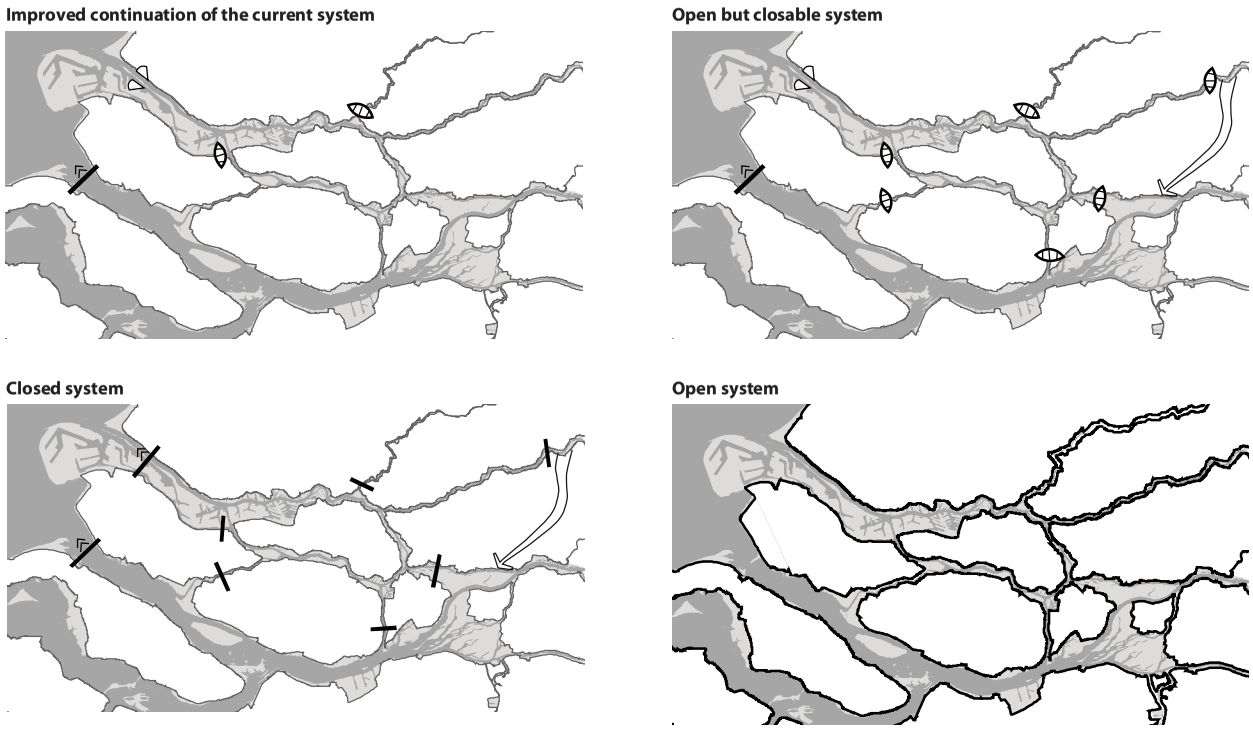
The Netherlands, Rijnmond Drechtsteden area



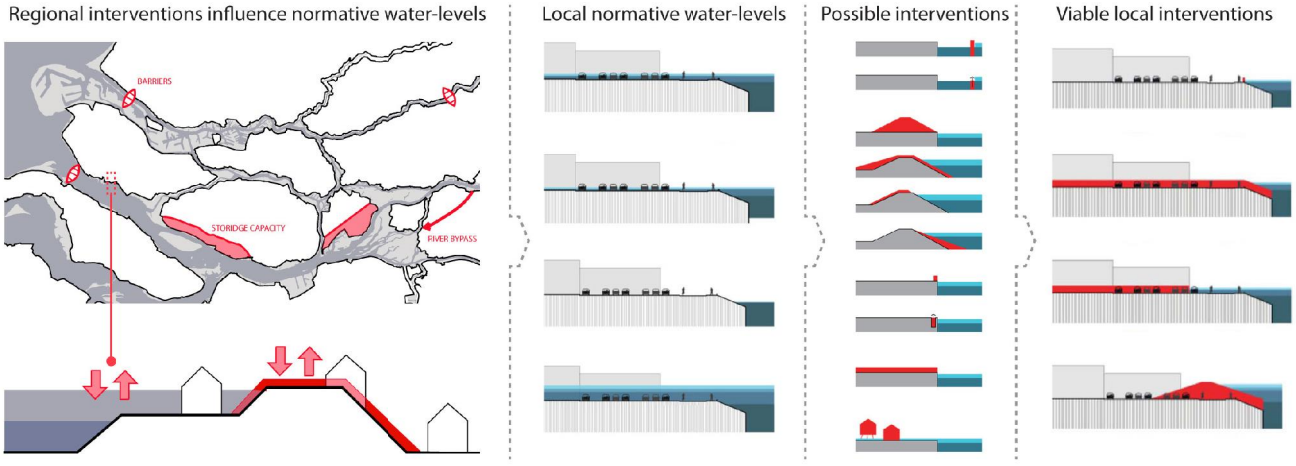
Future flood risk protection task



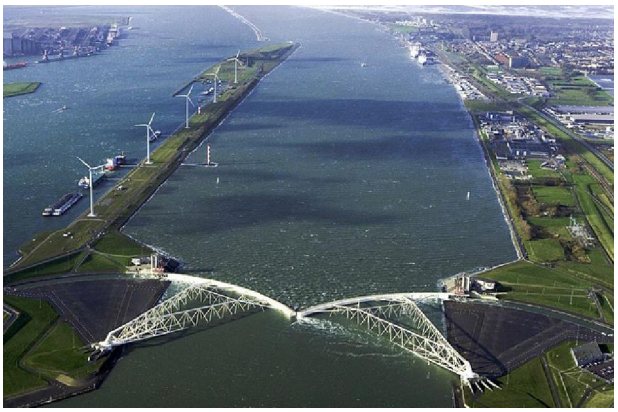
Interventions on multiple scales



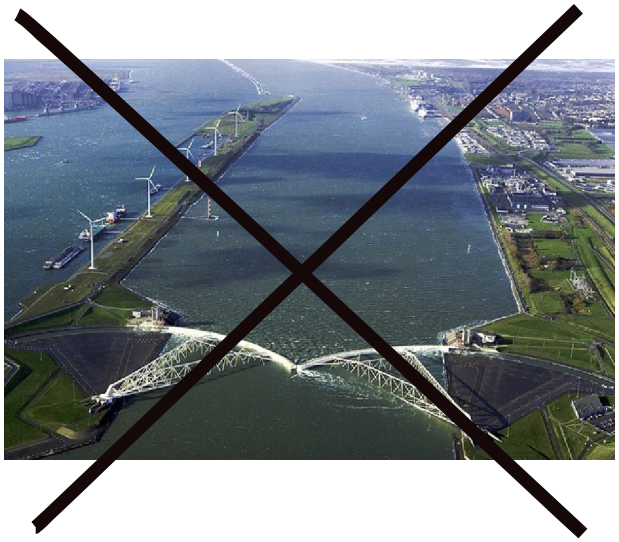
Alternative protection models Dutch Delta



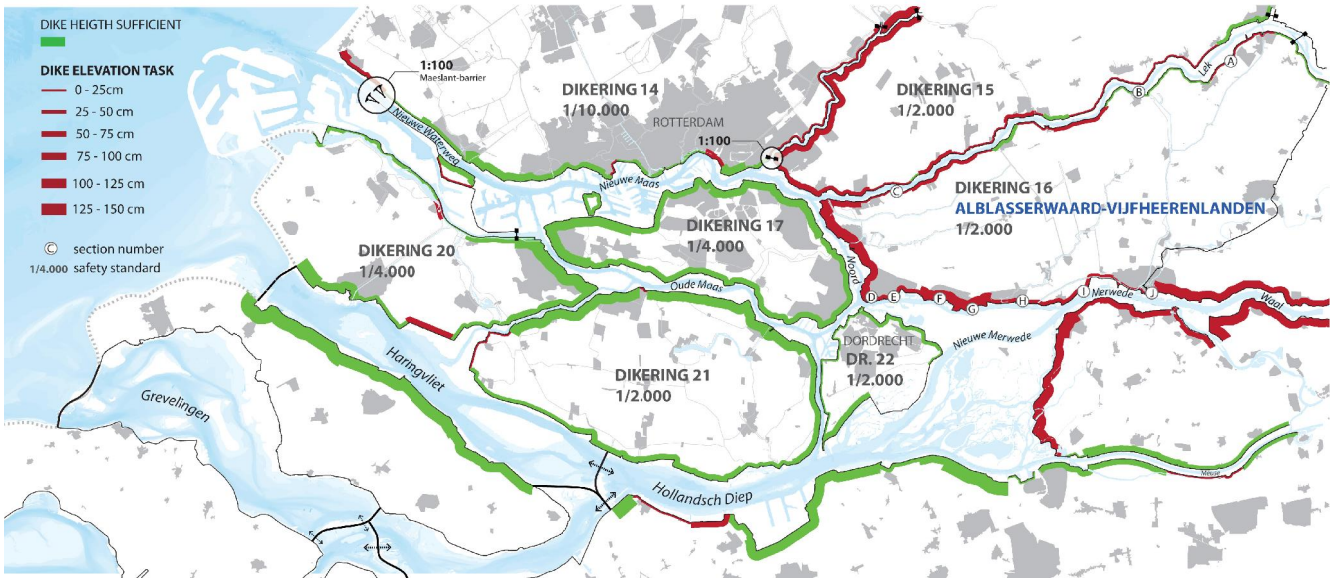
Relation interventions different scales



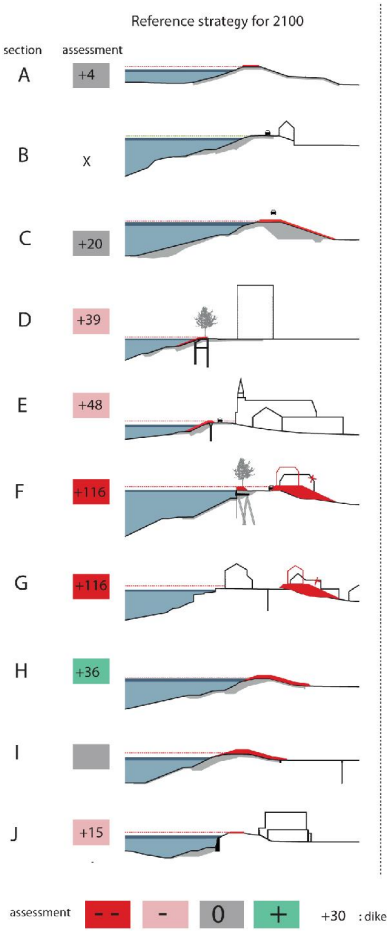
Relations scales Dutch Delta



Flood risk protection on the local scale



Local scale interventions current flood risk strategy



Spatial assessments local scale interventions

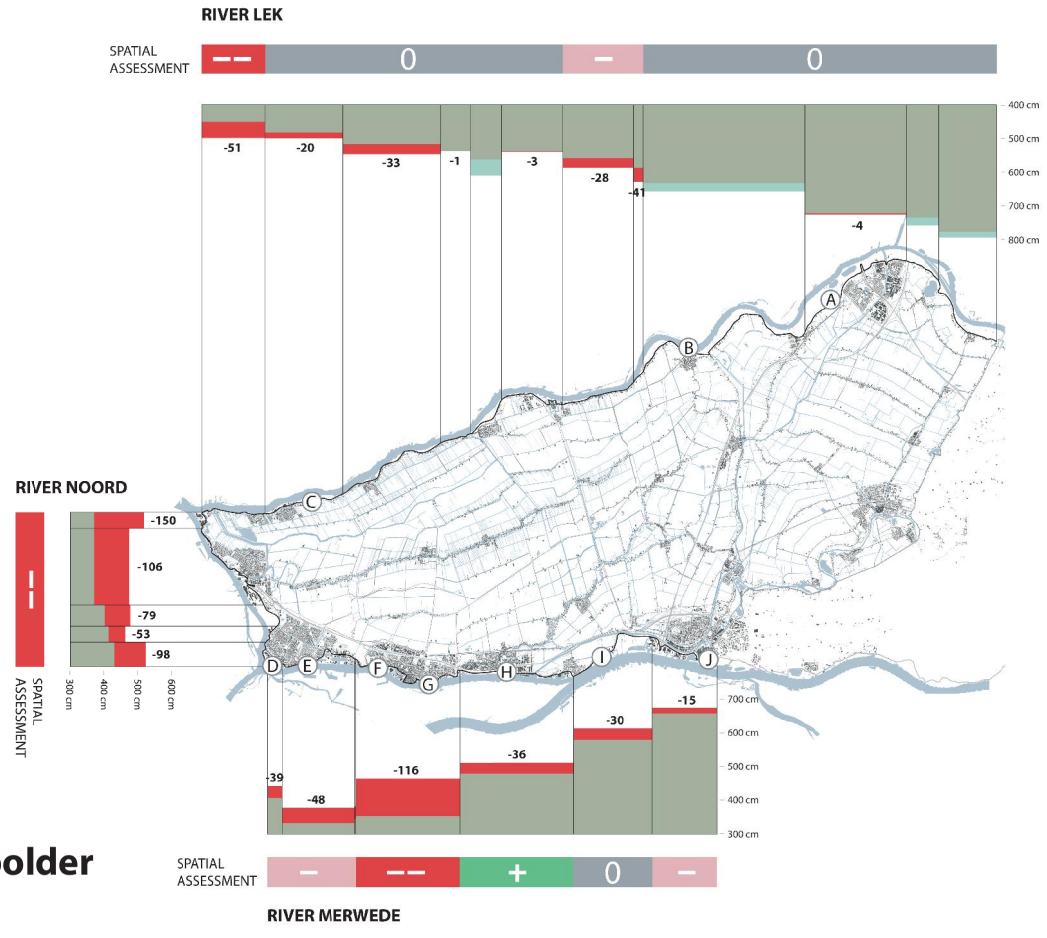
Assessment framework

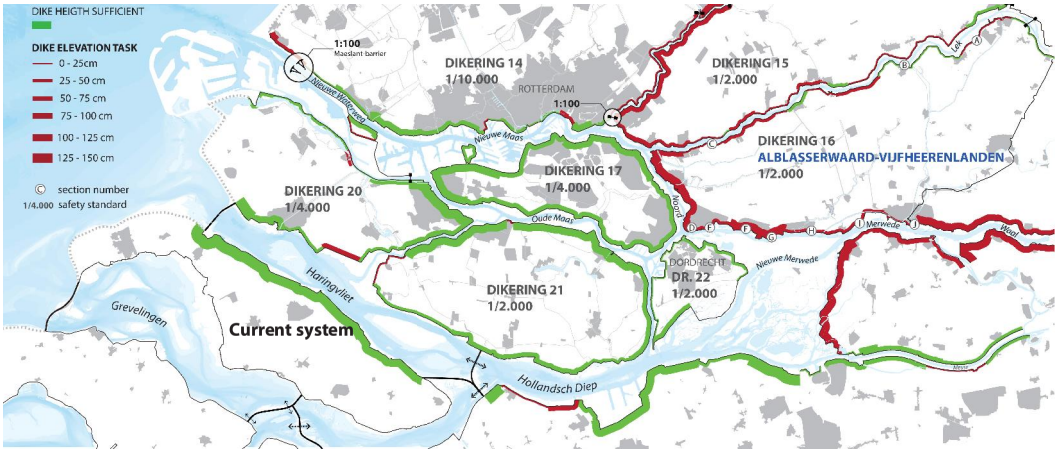
Location Stadshavens, Rotterdam, Mercuriusweg
Intervention Constructing a levee

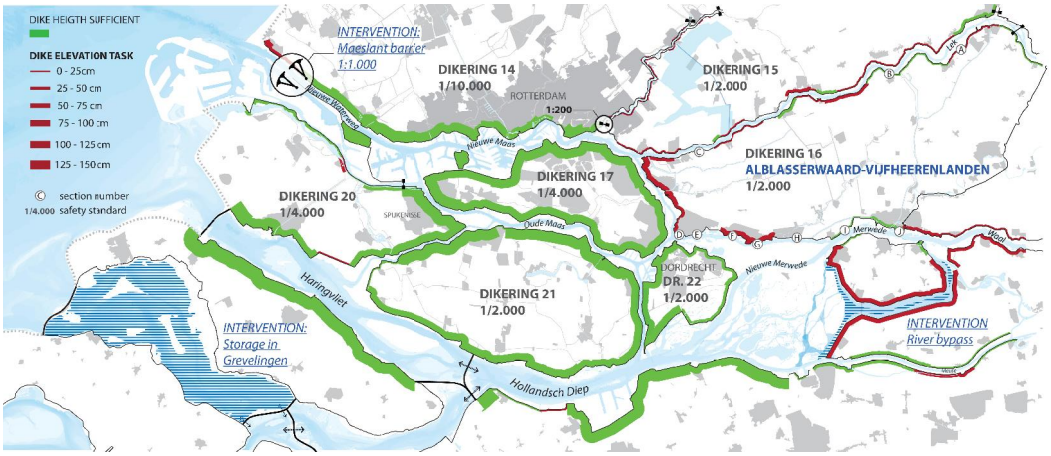
	Expert	Ecology	Urban Design	Urban Design	Landscape architect	Landscape architect
Utility	Functioning as residential, commercial, recreational or public space				+ -	o
	Accessibility and routing				+	o
	Ecological functioning	-				
	Maintainability		+	+		+
Attractiveness	Identity of the location / surroundings		-		-	-
	Recognition of structures		-			-
	Cultural recognition					
	Spatial recognition		-		-	-
	Diversity / alteration					
	Uniqueness			-	-	
	Logic of spatial arrangement		-			
	Image			-	-	
	Water-safety experience				+	+
	Attractiveness	-		+	-	o
	Intervention scale vs. Location scale				-	+
	Relation to the water	-		-	-	
Robustness	Reversibility			-	+	-
	Development opportunities		+	-	+	o
	Mulifunctional space utilisation				+ -	
	Robustness		+		+	+
	Flexibility				+	
	Durability					
	Group assessment	o	o -	+	o -	-	o -

-- - o + ++ important criteria

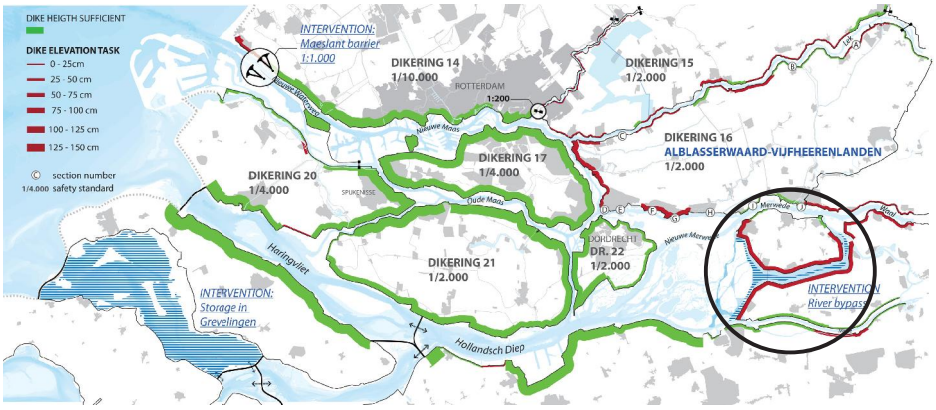
Assessment polder





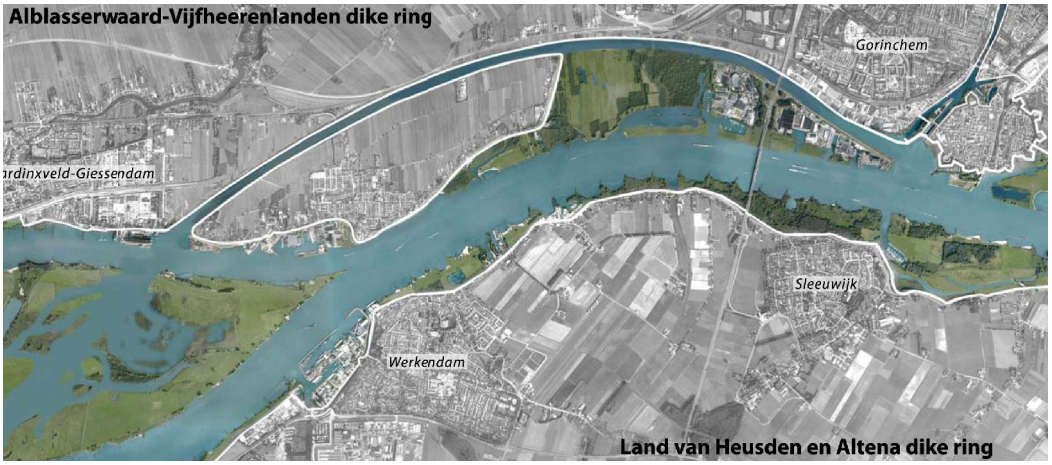


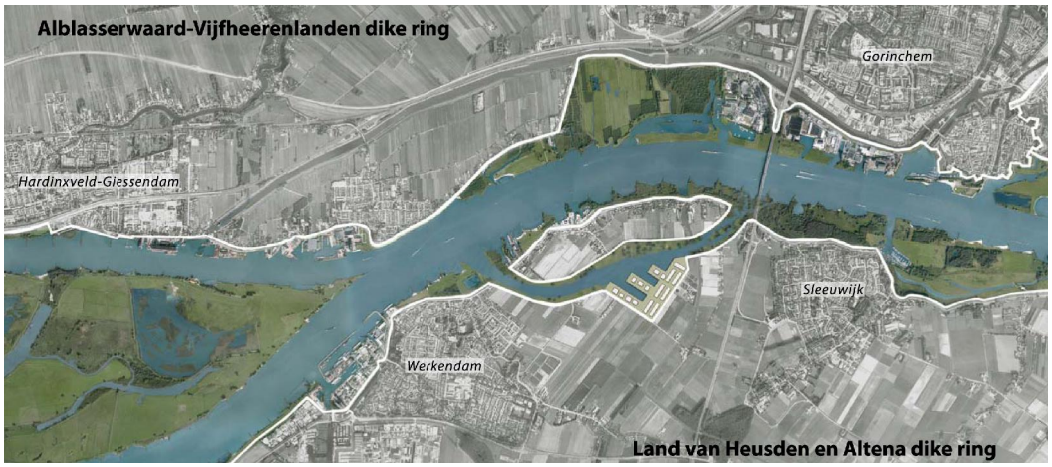
Alternative system intervention

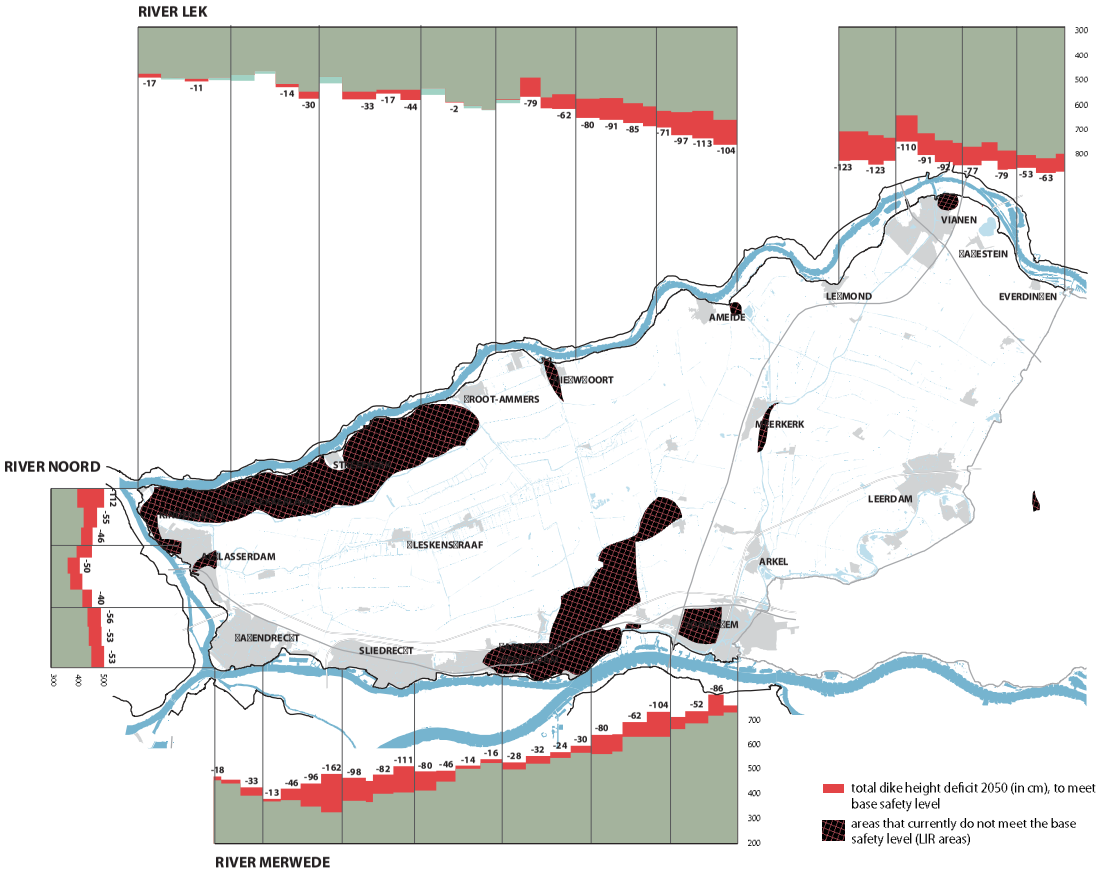


assessment - - + X X

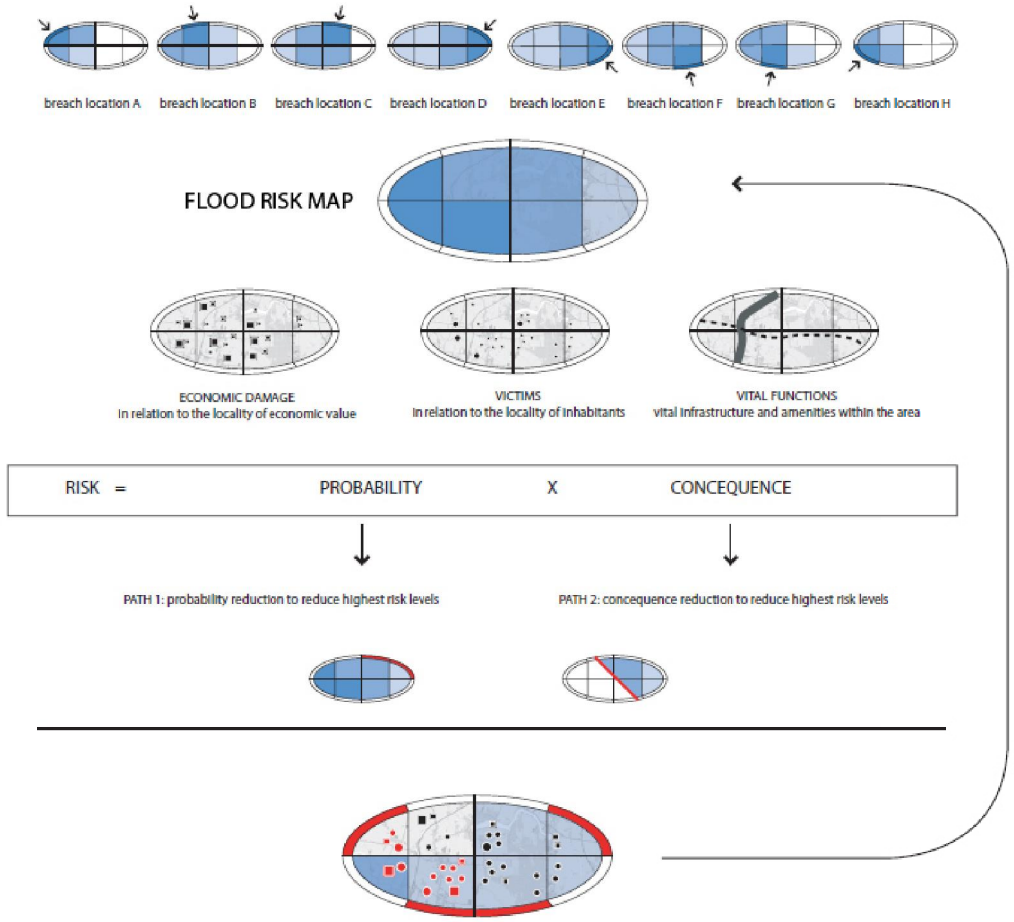
Spatial optimization



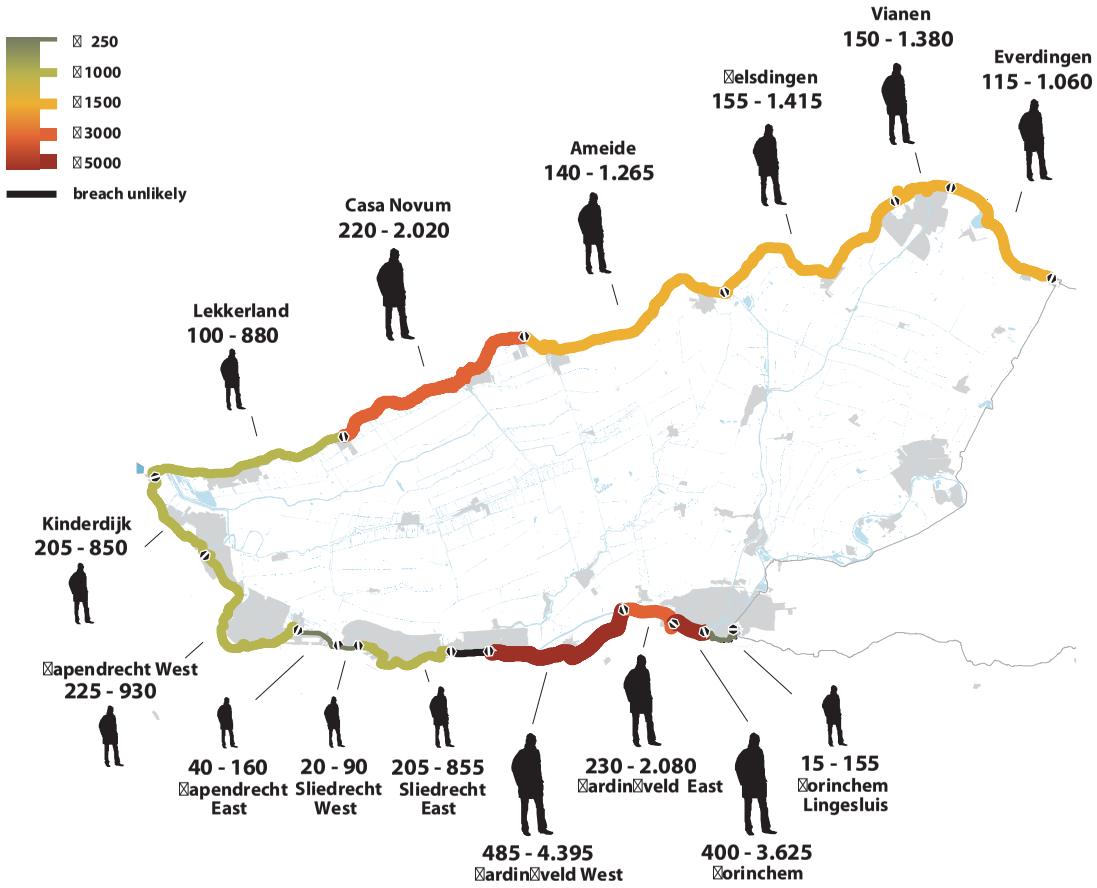




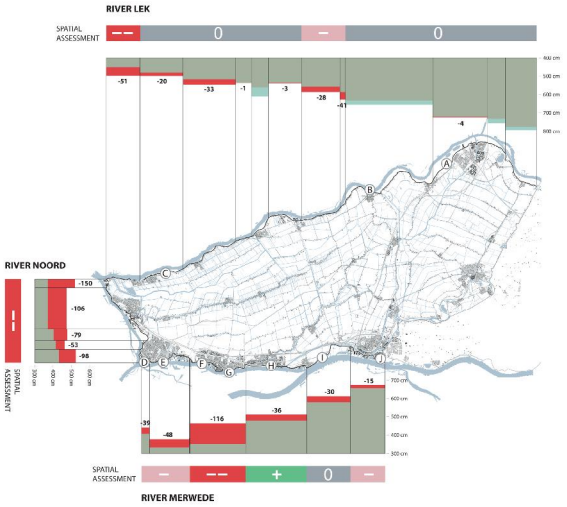
‘Risk based approach’

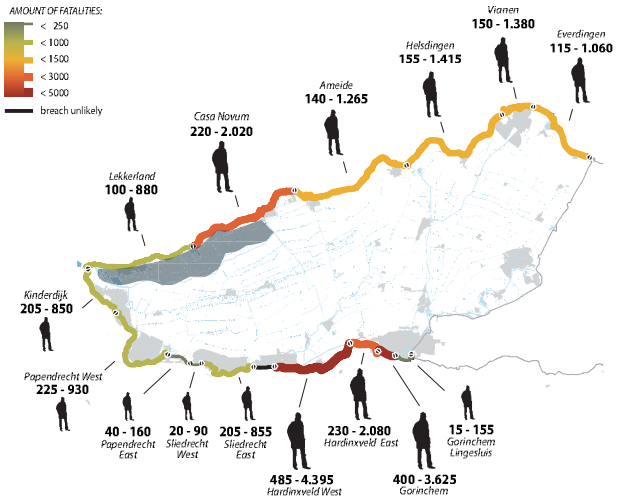


Dike segment contribution to flood risk

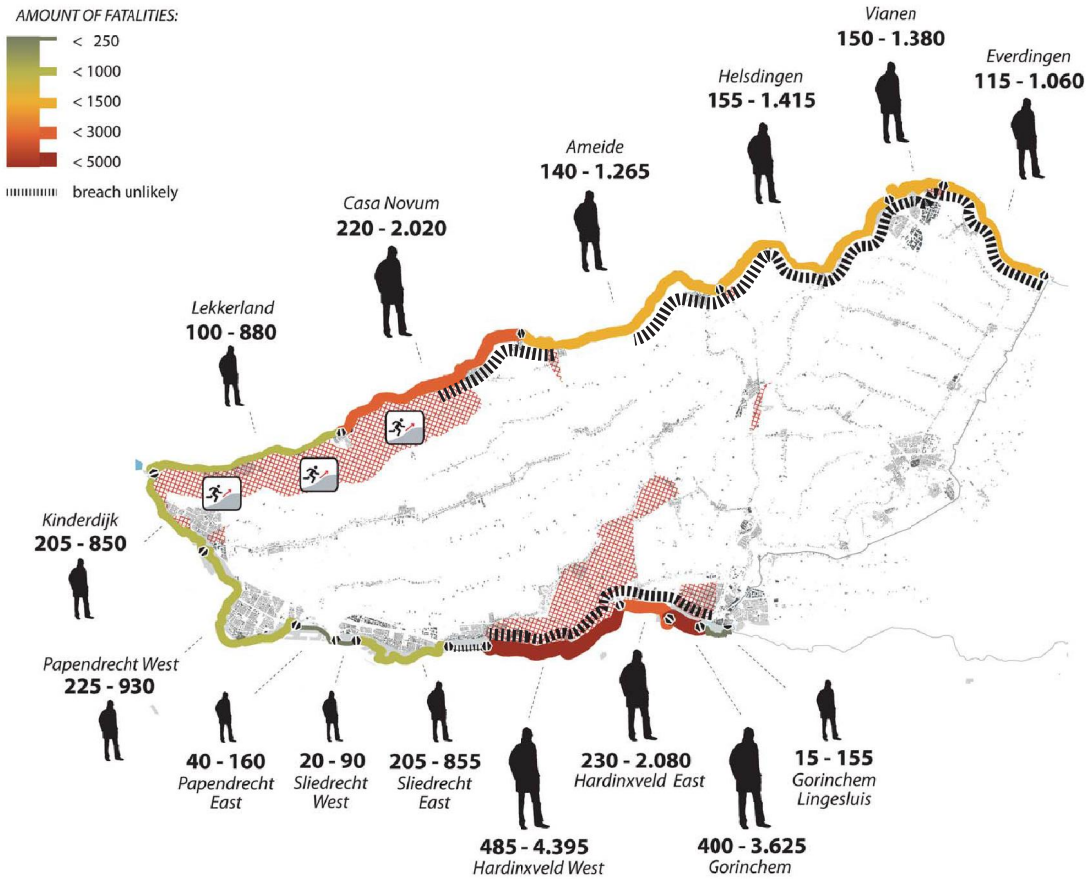


Number of fatalities per dike segment





Spatial impact and risk contribution as criteria



Alternative strategy

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DELTAS IN TIMES OF CLIMATE CHANGE II

Kennis voor Klimaat