Metavalley

Bridging theory and planning to circumvent the decaying social-ecological system of the MAVM

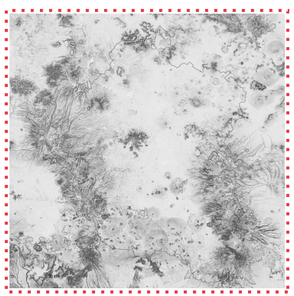
Problem statement

Regenerative Development and Design is an emerging field evolving from the concept of sustainability. While practices on sustainability focus on minimizing the damage to the natural and built environment, regenerative approaches focus not only on slowing, but reverting the degeneration of the environment by designing human systems that can co-evolve with the natural systems. However, in practice, there is a lack of integration between approaches like Regenerative Develoment and Design and splatial planning. This research, therefore, uses the case study of the Metropolitan Area of the Valley of Mexico (MAVM) to test how can regenerative approach be integrated in the planning practice in the MAVM.

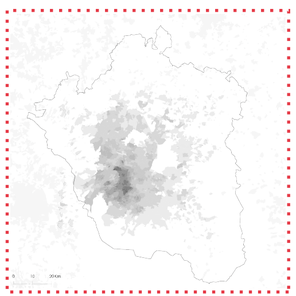
Research question

How can geodesign integrate renerative development in the planning practice in the the MAVM in order to circumvent the current decaying social-ecological system?

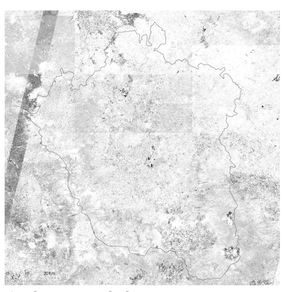
Representation model



Slope

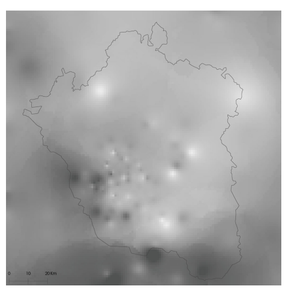


Landprice

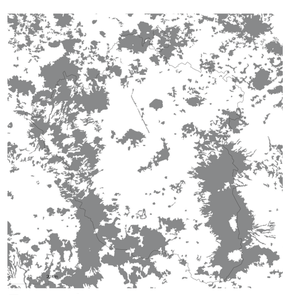


Soil permeability

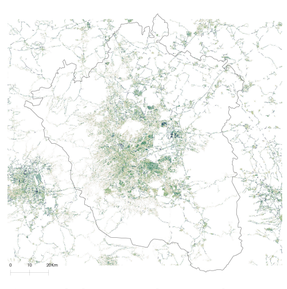
Runoff



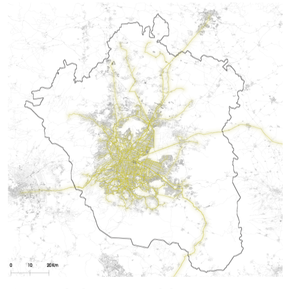
Rainfall



Forested areas

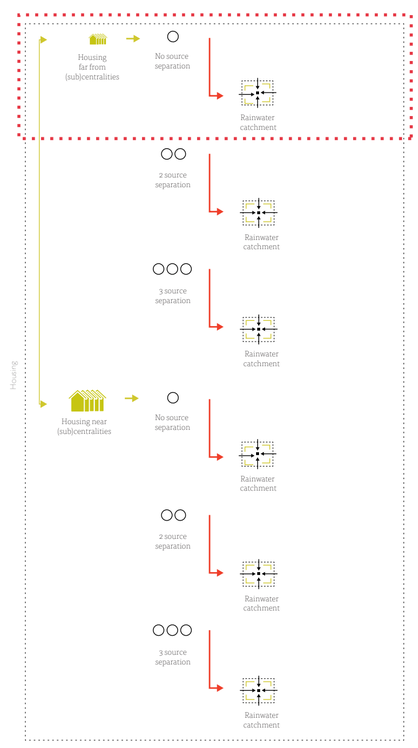


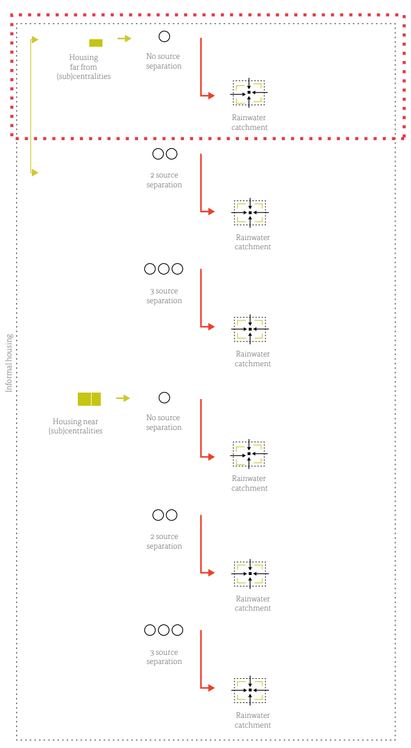
Accesibility to subcentralities

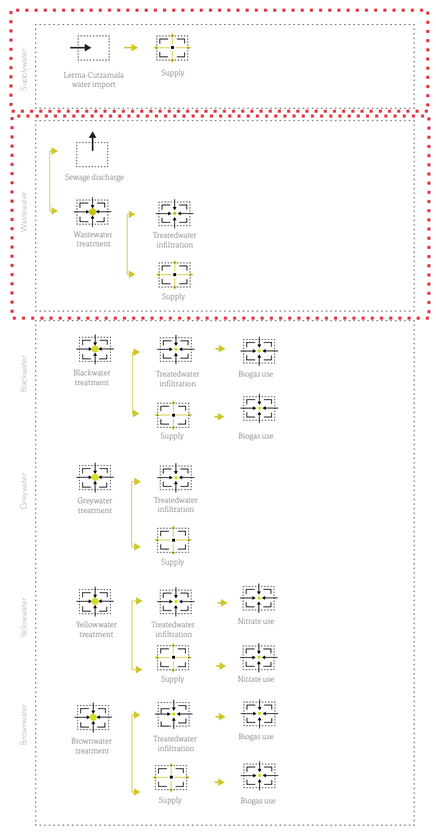


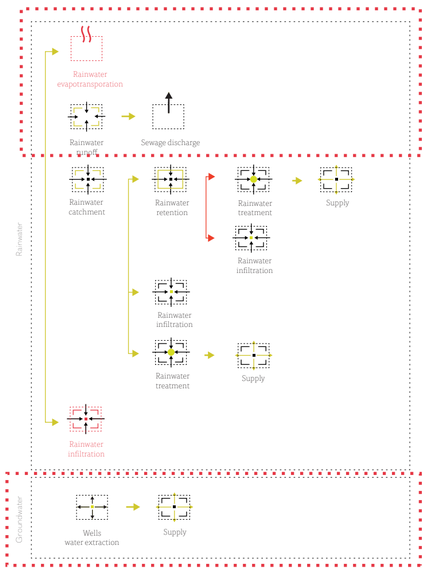
Accesibility to public transport

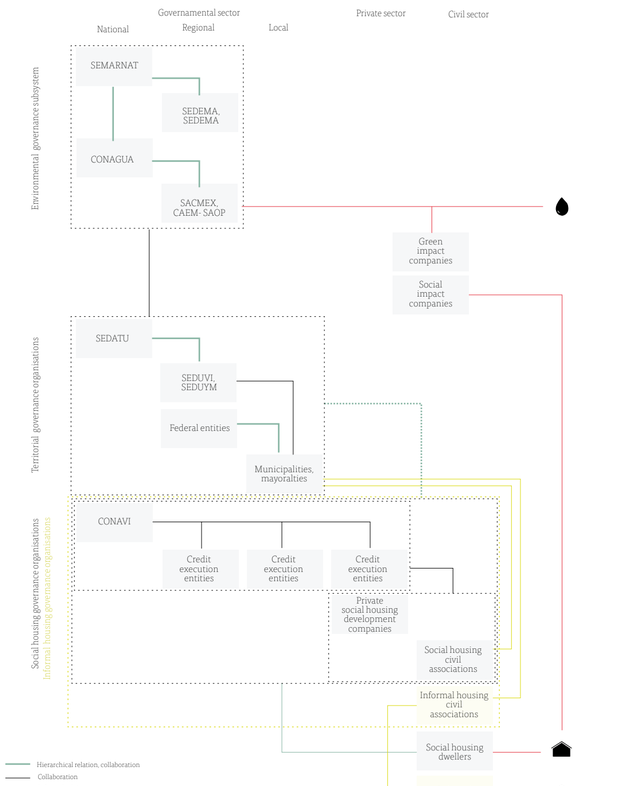
Process (and change) model







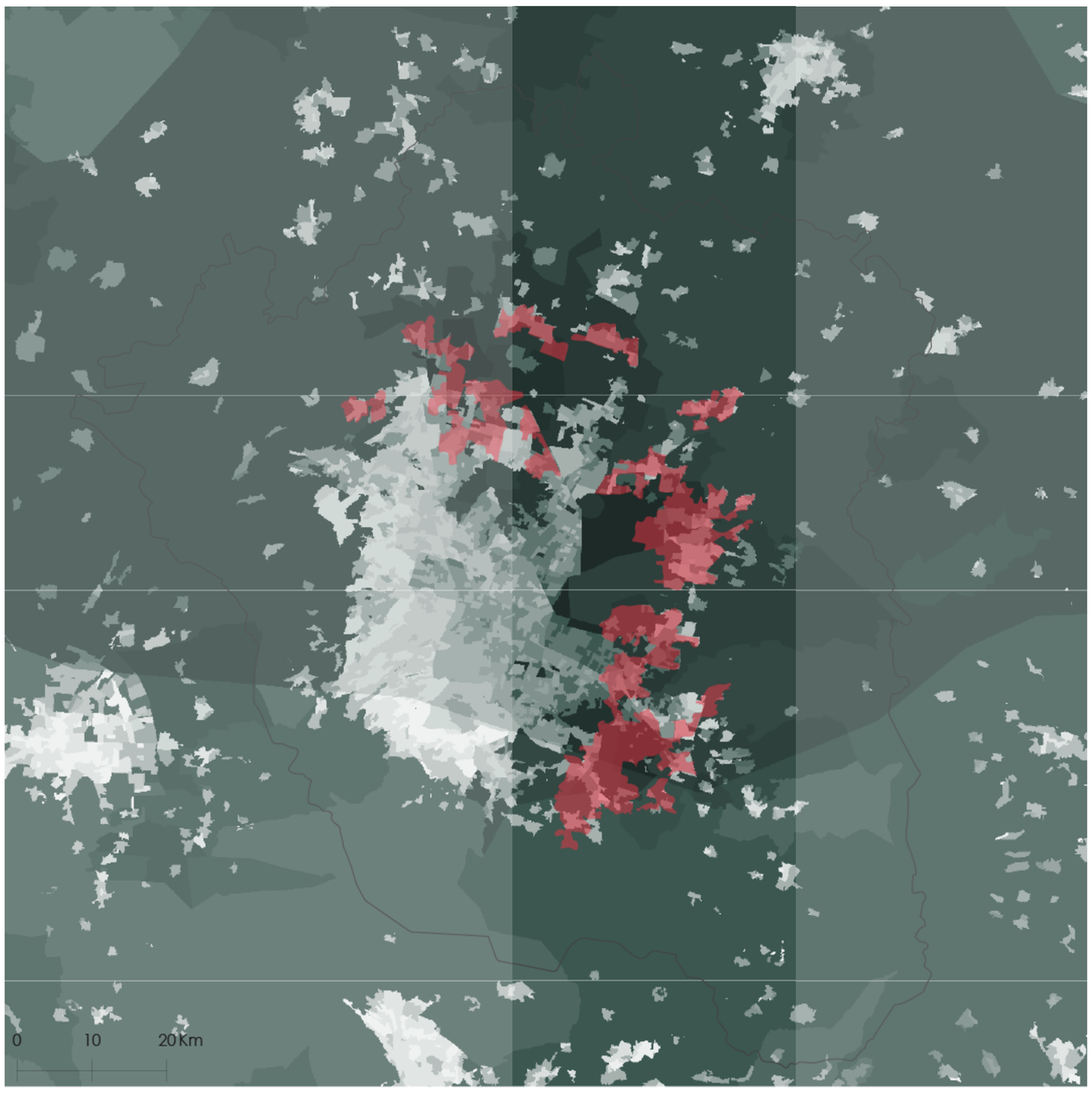


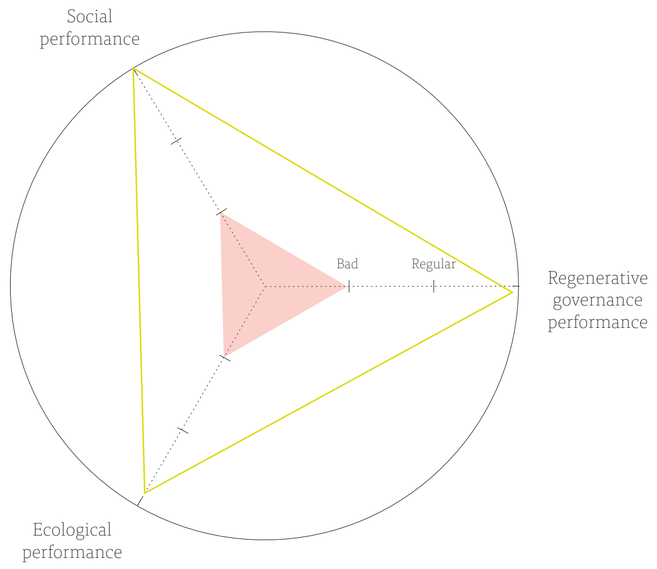


Social-ecological interactions

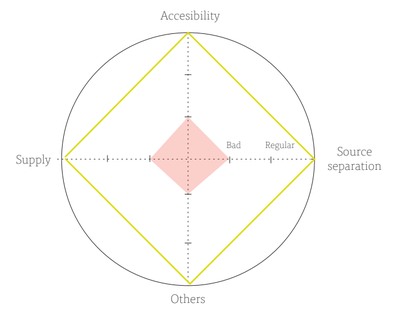
Governance interactions

Evaluation (and impact) model

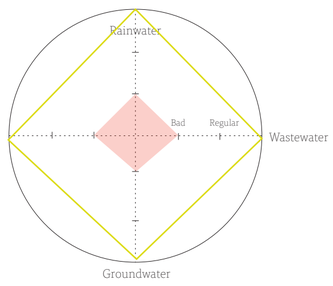




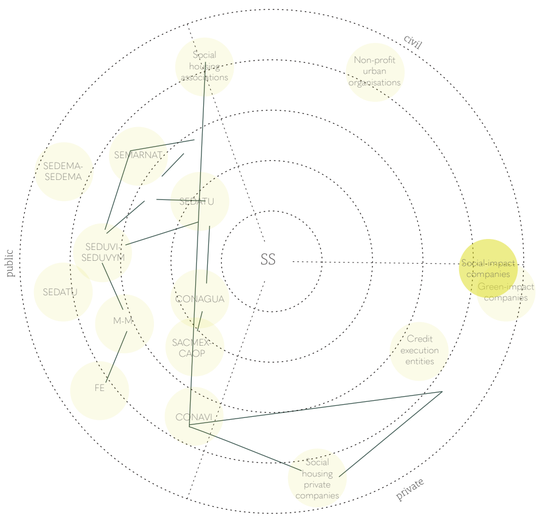
Regeneration performance



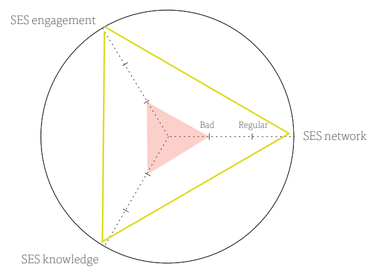
Social performance



Ecological performance



Governance structure of the social-ecological system



Governance performance

Decision model

Scenario 1:
Investment as the system works now (*shown here*)

Scenario 2:
Investment in the ecological capacities

Scenario 3:
Investment in the social and ecological capacities

Emma Paola Flores Herrera
4739566
Urban Metabolism
Alex Wandl & Diego Sepulveda

TU Delft MSc Urbanism 2018-2019