



ISRAEL POLICE

POLICE FORCE ALLOCATION IN RURAL AREAS:

A SPATIAL INTEGRATIVE MODEL

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Setting Patrol Areas

- ∅ The goal: efficient reallocation of police force in rural area
- ∅ The mean: geographical model computing size of required police force and its patrol area



Theory and Assumptions

- Ø Patrol car's origin is the area where most of criminal activity occurs
- Ø Available resources are limited
- Ø Time limit exist for arrival



Method

∅ 3D analysis

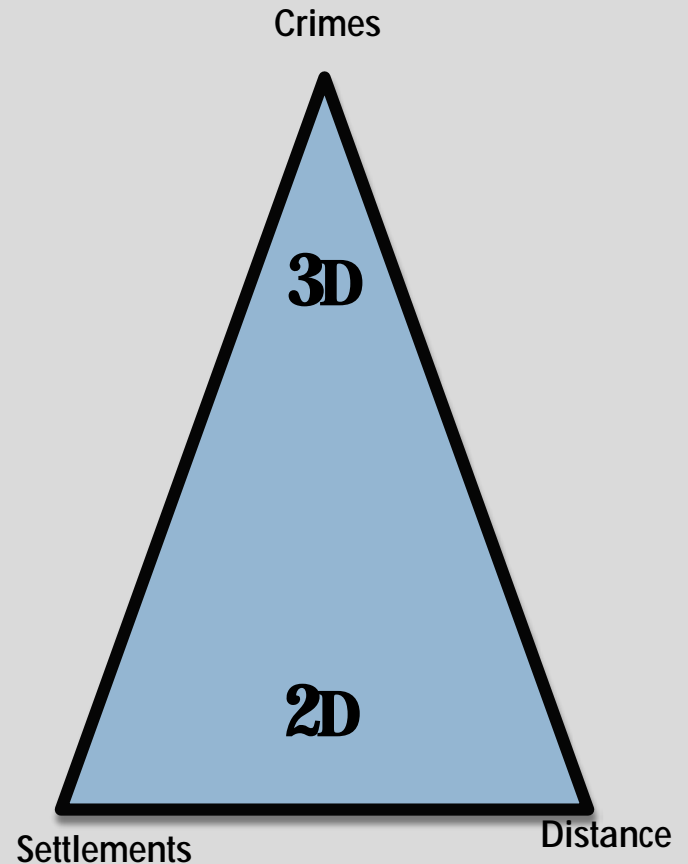
∅ Cluster detection

∅ Mean Centers

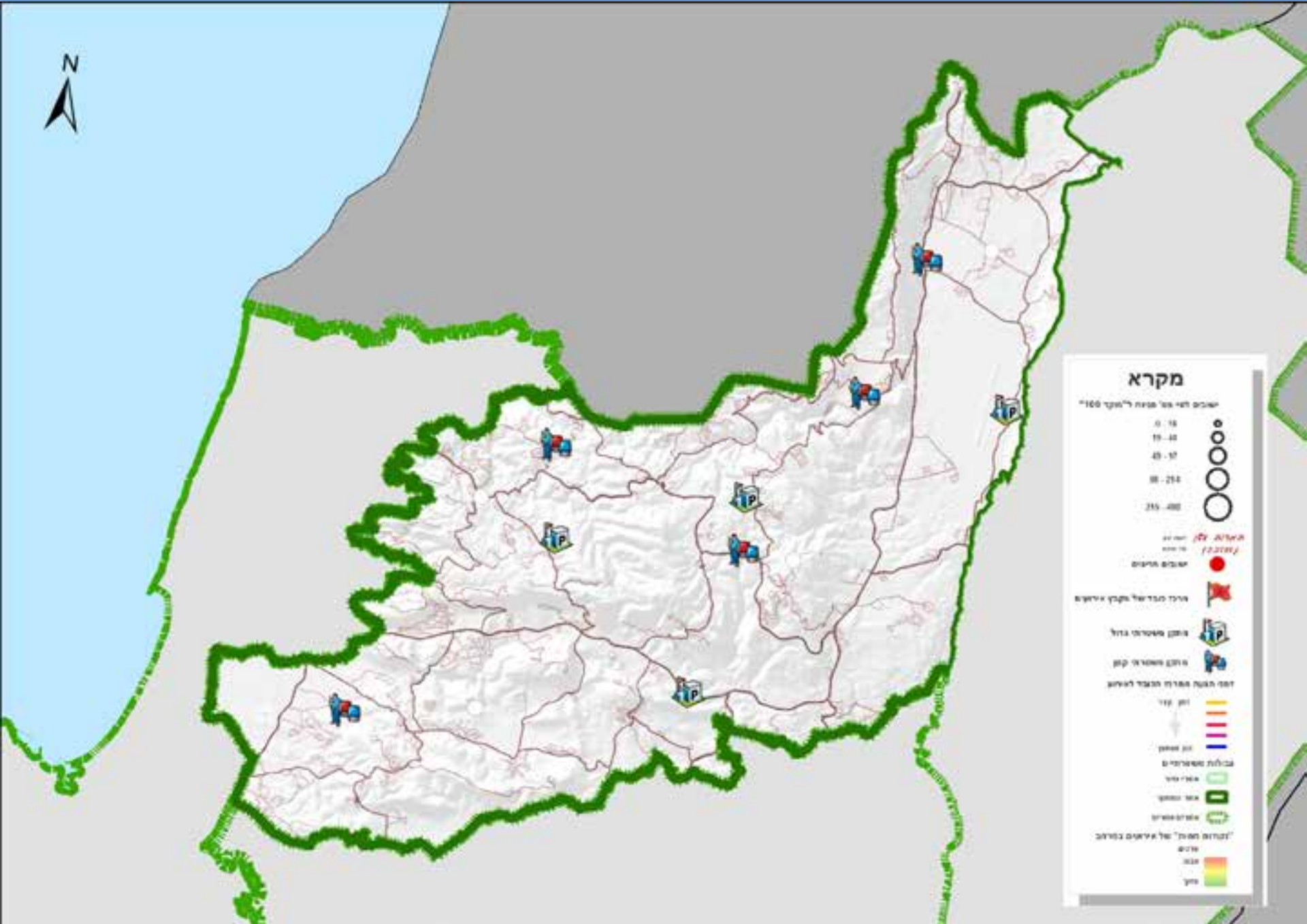
∅ Hot Spots

∅ Network analysis

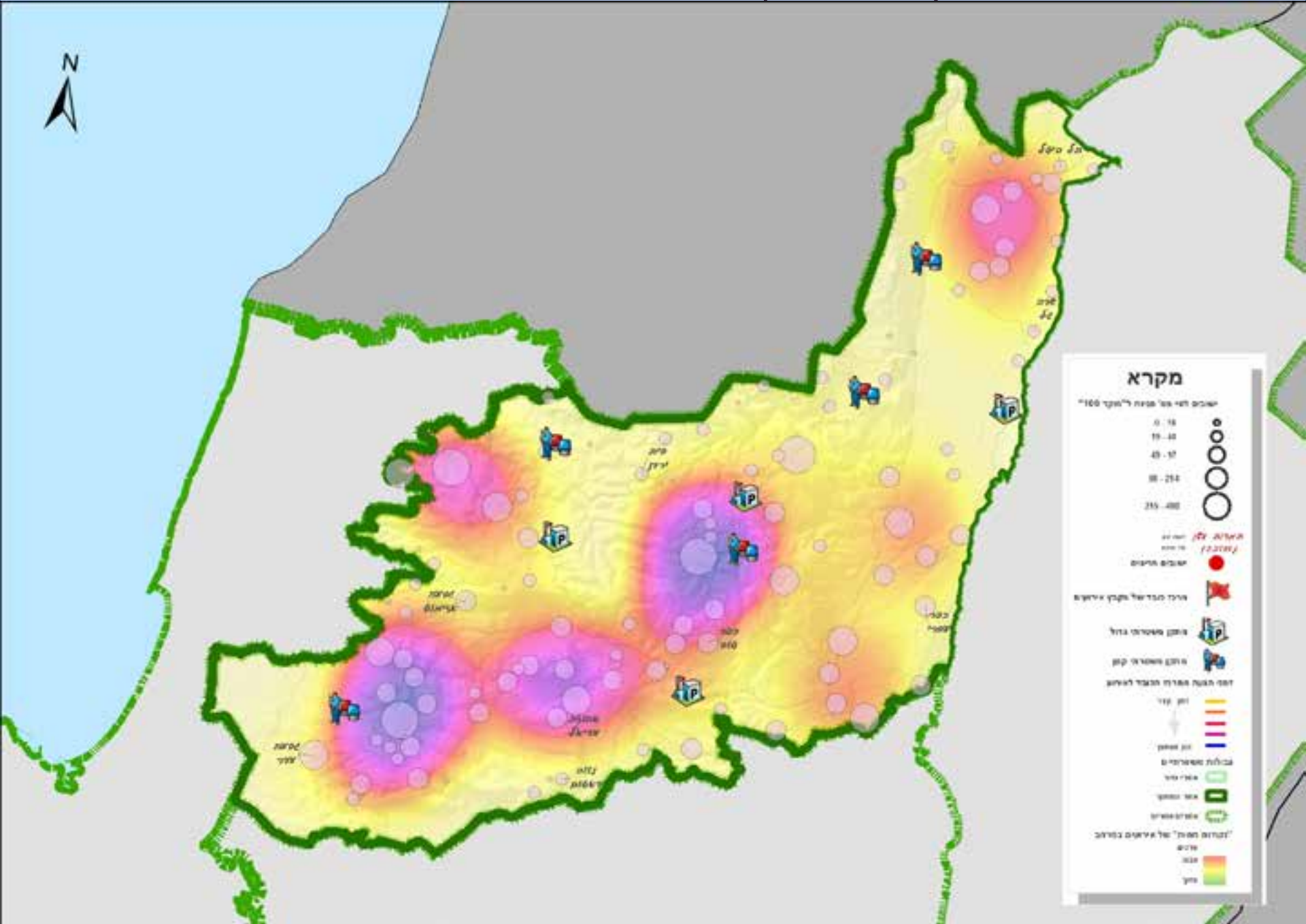
∅ Determining Patrol Areas



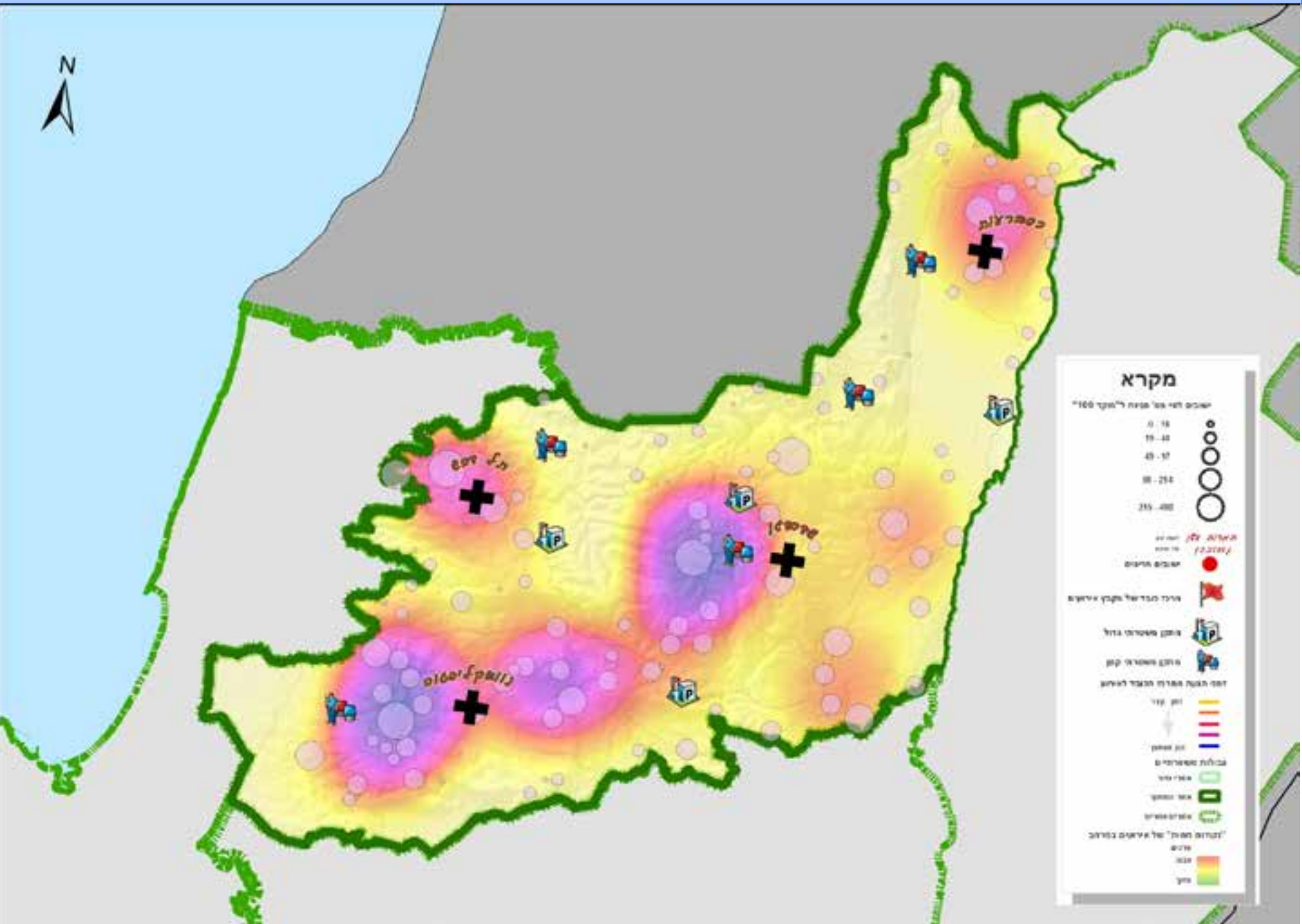
Research Area



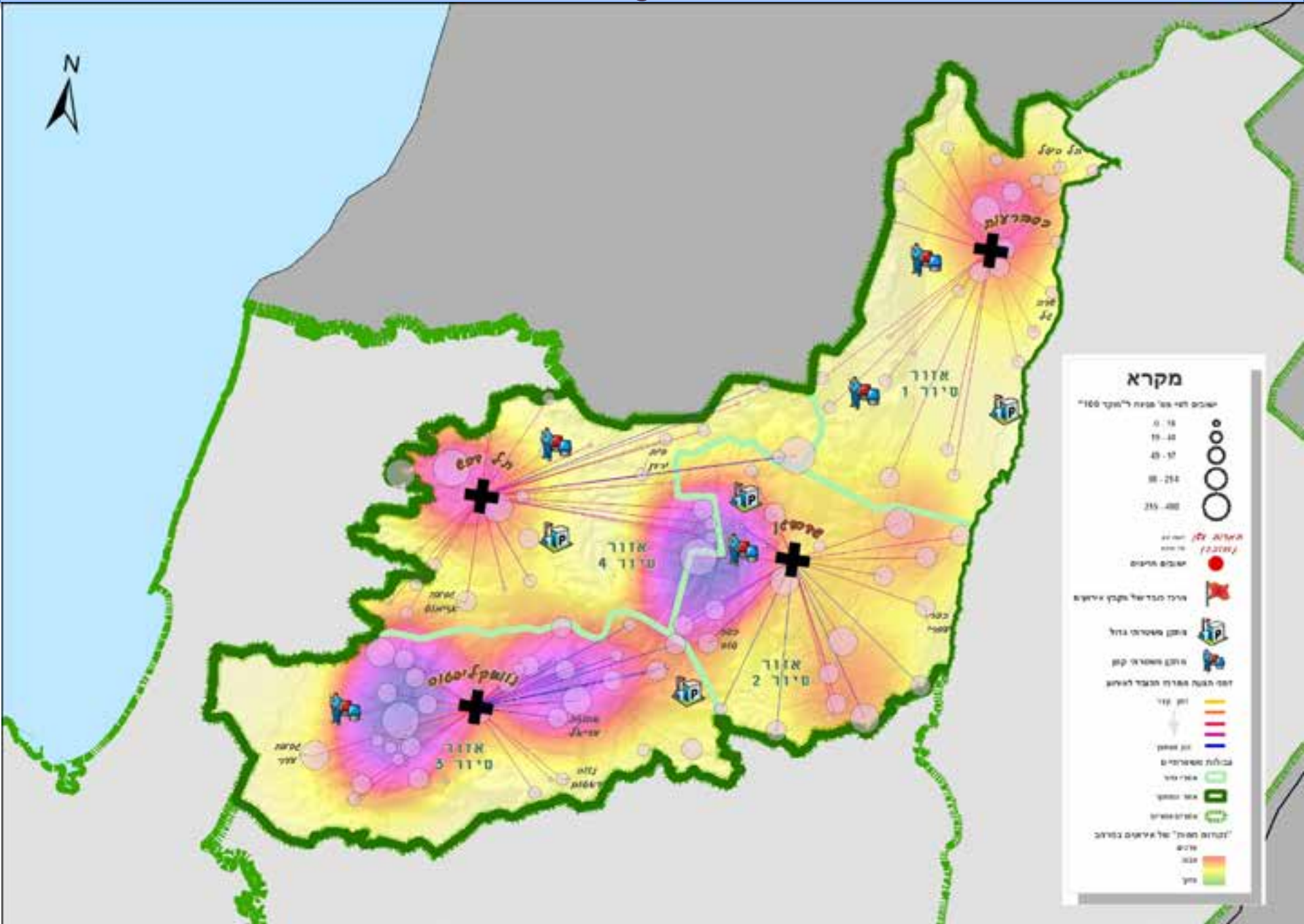
Cluster detection & Hot Spots Analysis



Mean Centers



Determining Patrol Areas





Conclusions & Summary

- ∅ Model outputs:
 - ∅ Defined area for each police patrol car
 - ∅ Number of patrol cars required
 - ∅ Exceptional settlements
 - ∅ Additional data
- ∅ High-quality and practical tool for police chief command and decision makers



Conclusions & Summary

THANK YOU

FOR LISTENING !