



# WATER AND SOIL BASED SPATIAL PLANNING AND DESIGN FOR RESILIENT DUTCH SAND LANDSCAPES

Ir. Tapasya Mukkamala, Wageningen University & Research

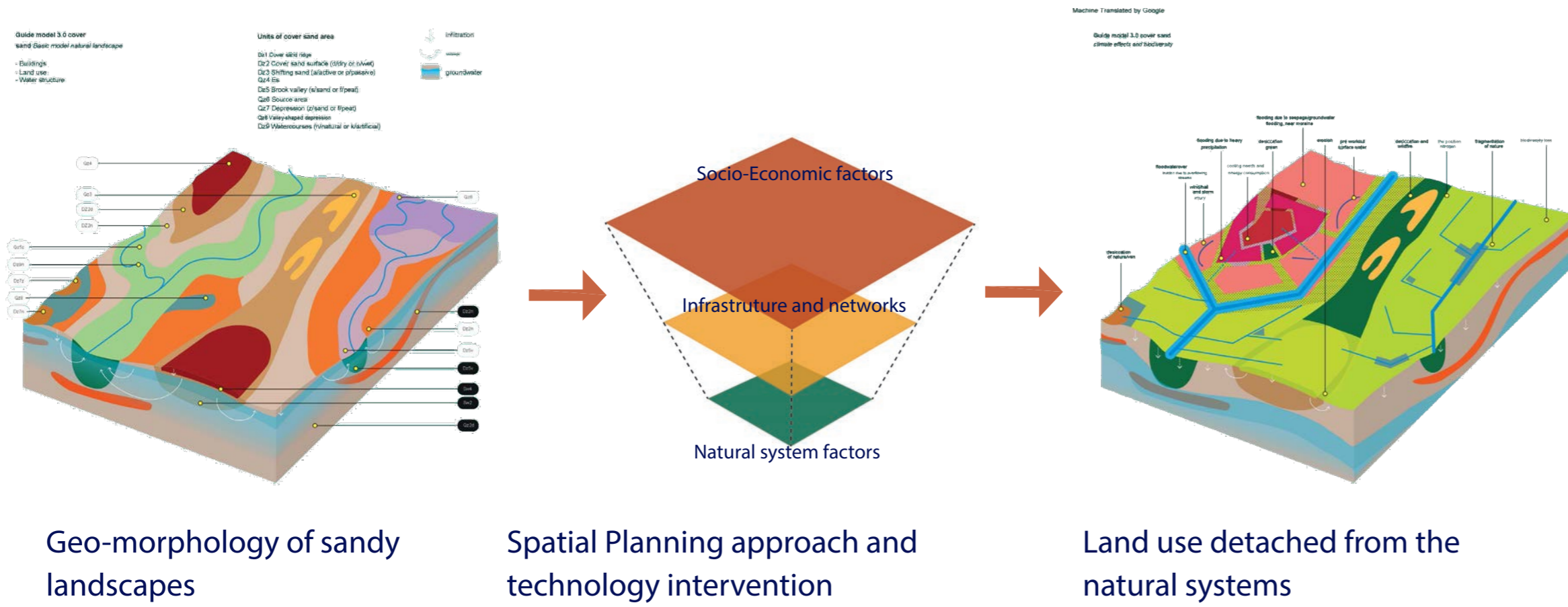
Advisory group: Dr. Martha Bakker, Dr. Ilse Voskamp, Dr. Jasper Candel & Dr. Jakob Wallinga



## BACKGROUND

Extreme spatial-morphological alterations. → High modified production landscapes. → Poor quality of soil and watersystems. → Vulnerable to drought and floods.

## PROBLEM IDENTIFICATION



Geo-morphology of sandy landscapes

Spatial Planning approach and technology intervention

Land use detached from the natural systems

Source: (Maas & Grond, 2021)

## CHALLENGES AND GAPS



Delineation of socio-ecological landscape systems.



Linking functional and structural relationships of landscape to spatial design.



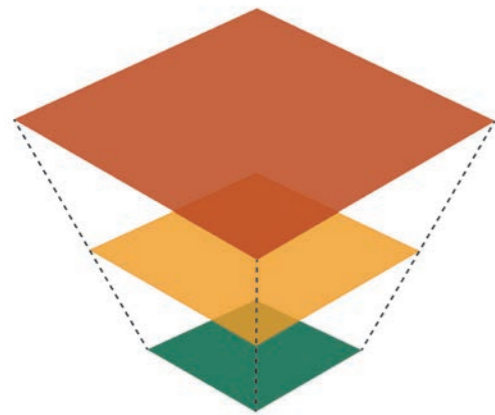
Translation of complex prediction empirical models to usable tools.



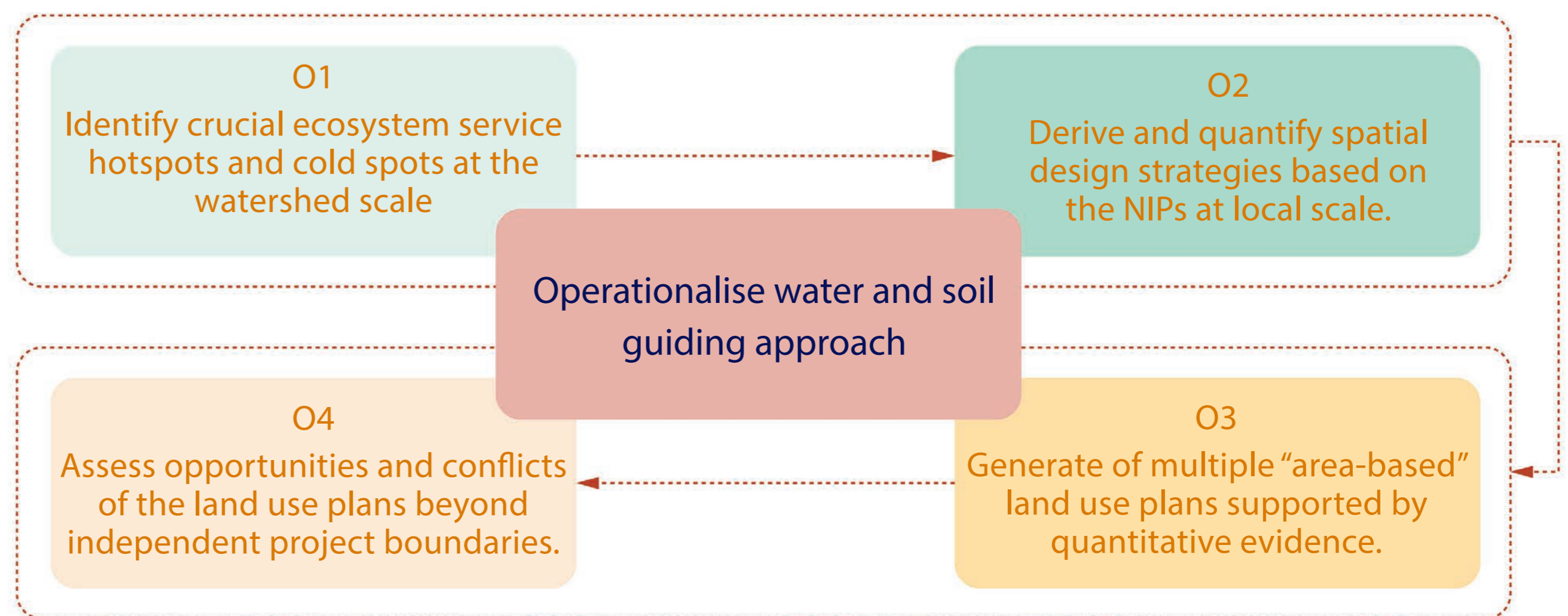
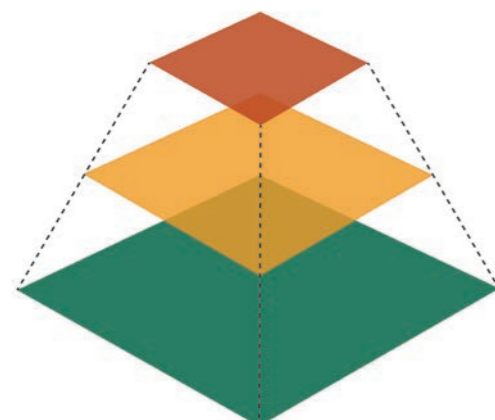
Knowledge on the impact of land use change beyond administrative boundary.

## OBJECTIVES

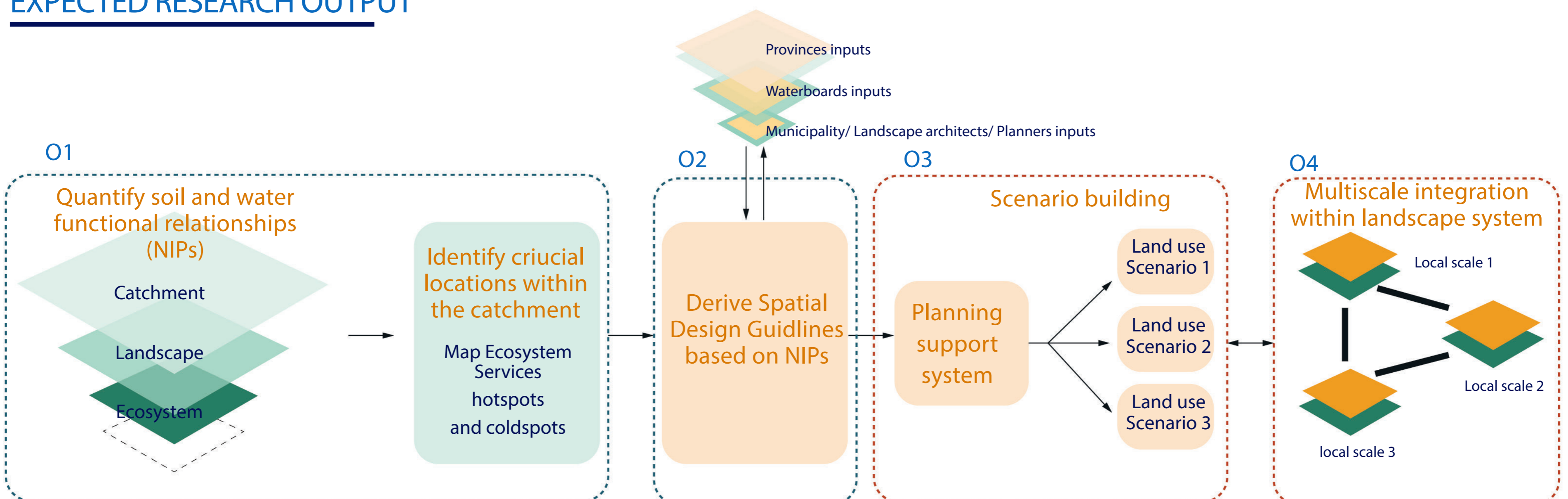
Highly modified and managed landscapes



Self-steering Nature inspired landscapes



## EXPECTED RESEARCH OUTPUT



## BROADER RESEARCH IMPACT

