



ENSURE E-LEARNING TOOL

F39_Applying the concept of vulnerability:
the case of Negev

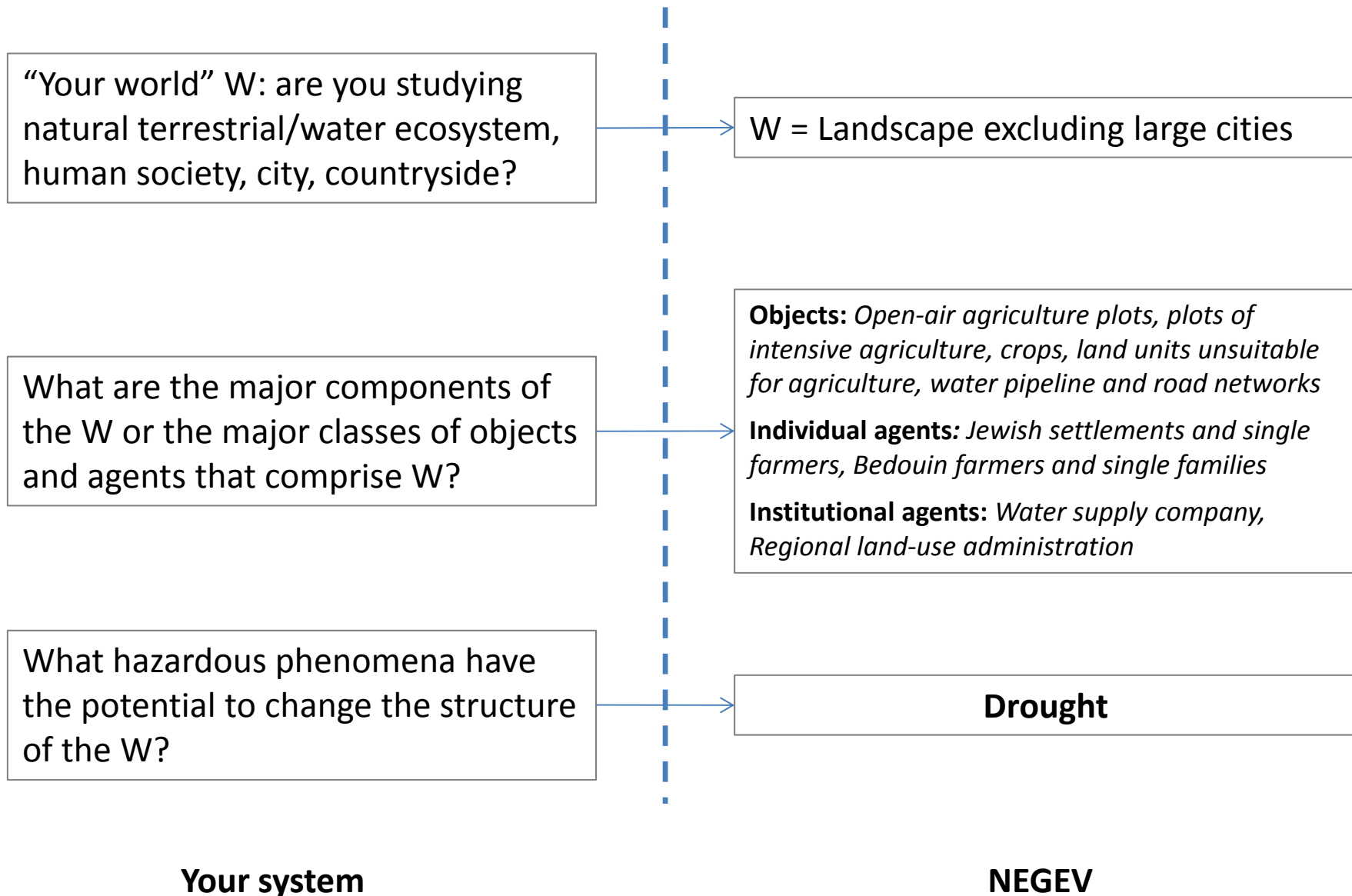
Slides by
TAU Team



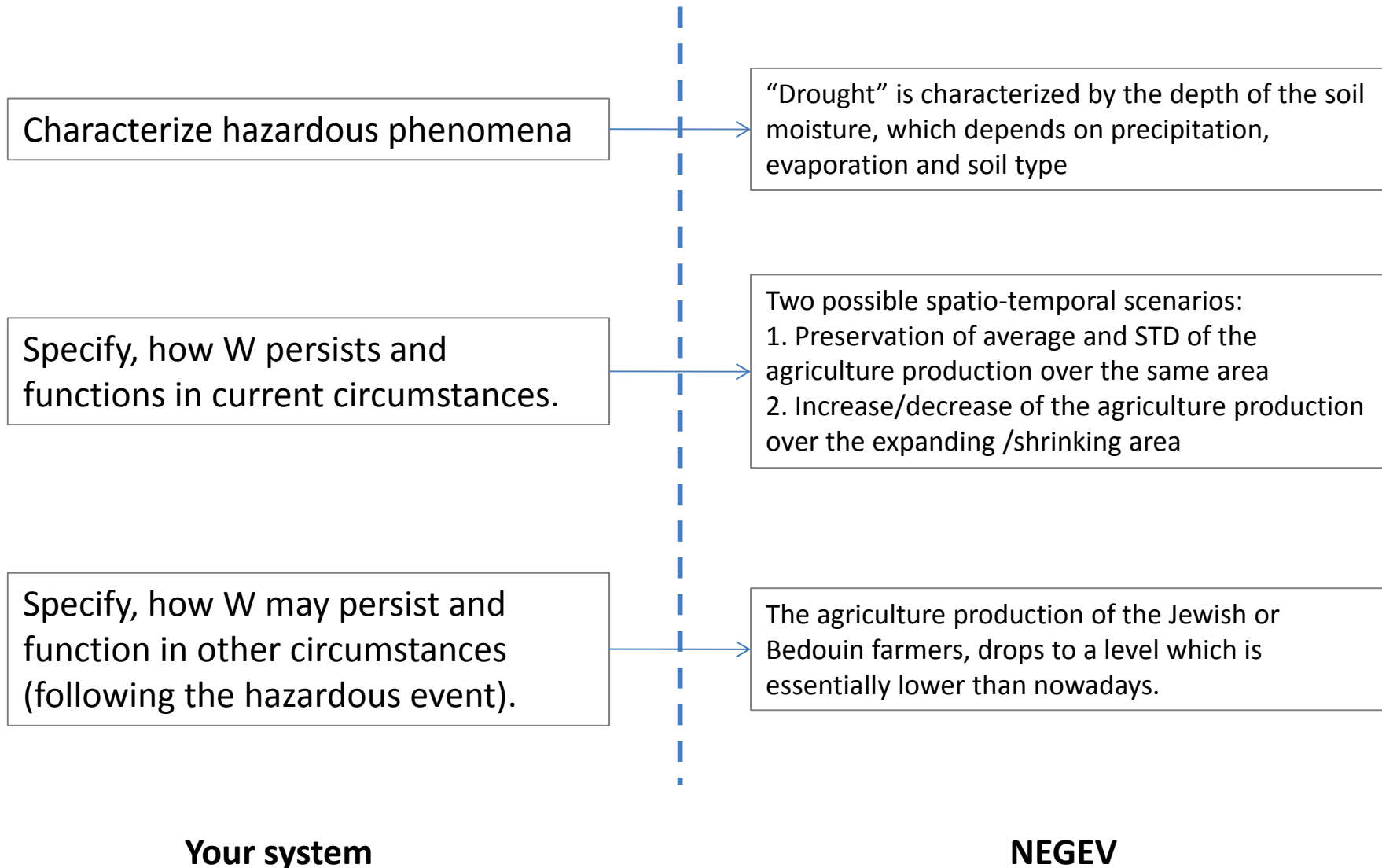
-1.89 3740.46 -625.5



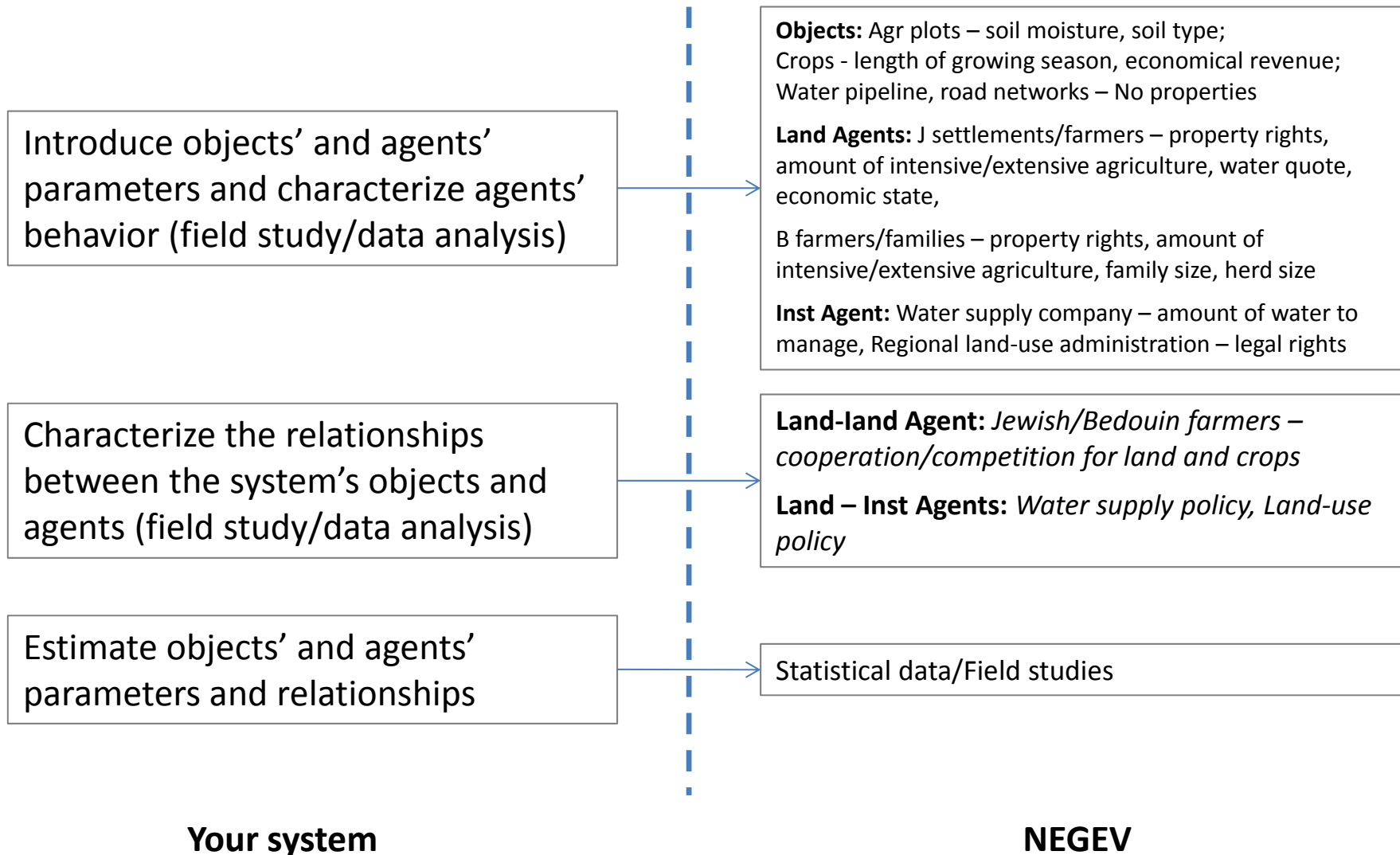
Vulnerability of what (*define system*) to what (*define factors*)?



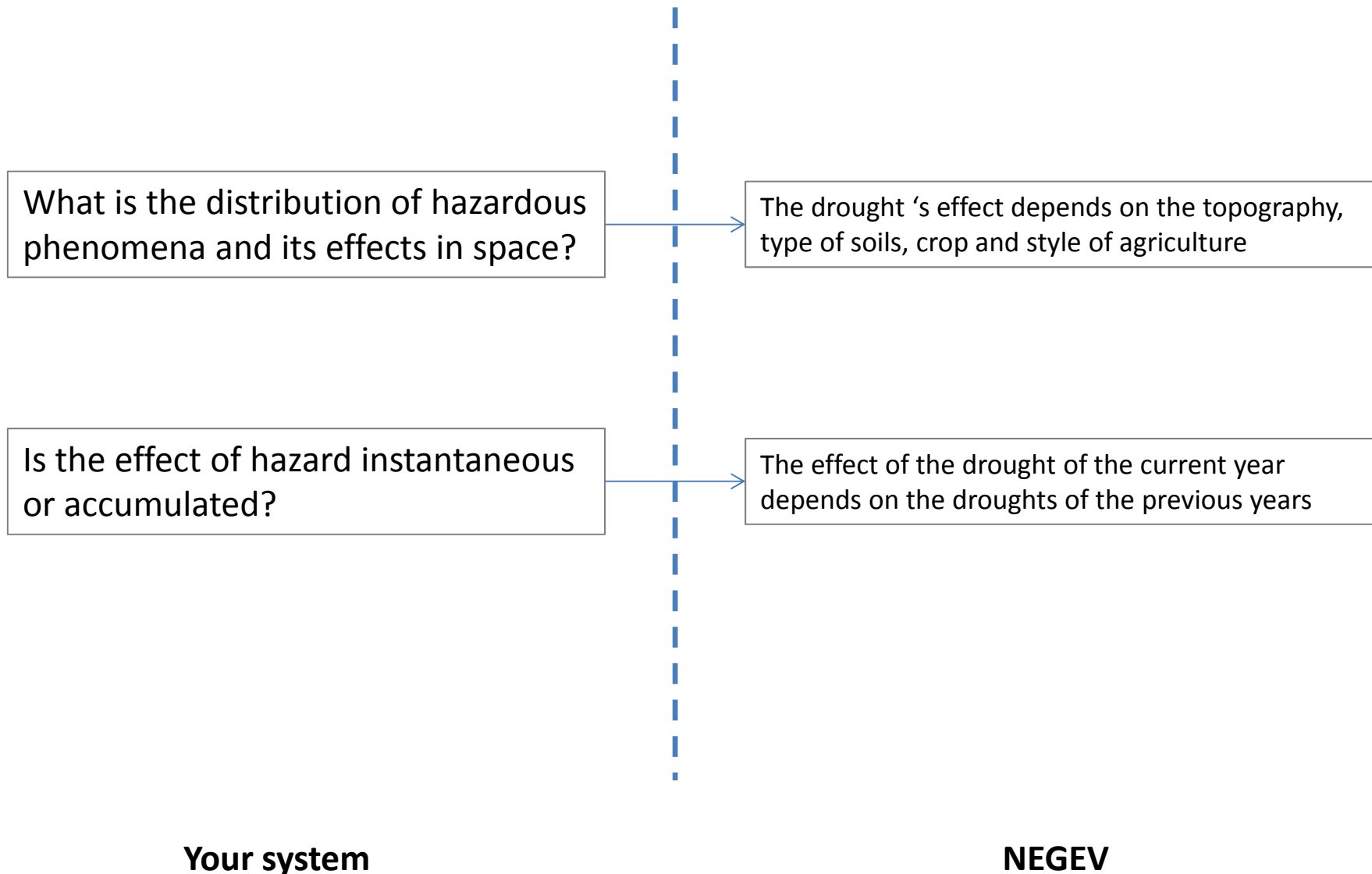
Characterize the phenomena that can be hazardous to your system.
Characterize feasible qualitatively different states of your system (give examples)



**Define basic parameters and relationships between system's components,
Provide as quantitative as possible estimates of the parameters and relationships**



Establish spatio-temporal aspects of system's vulnerability



Specify the effects of hazardous phenomena on objects' and agents' properties, and relationships between them, establish scenarios of hazardous phenomena

Which parameters of objects and agents can be used to measure the vulnerability to hazardous phenomena?

The amount of **intensive** agriculture

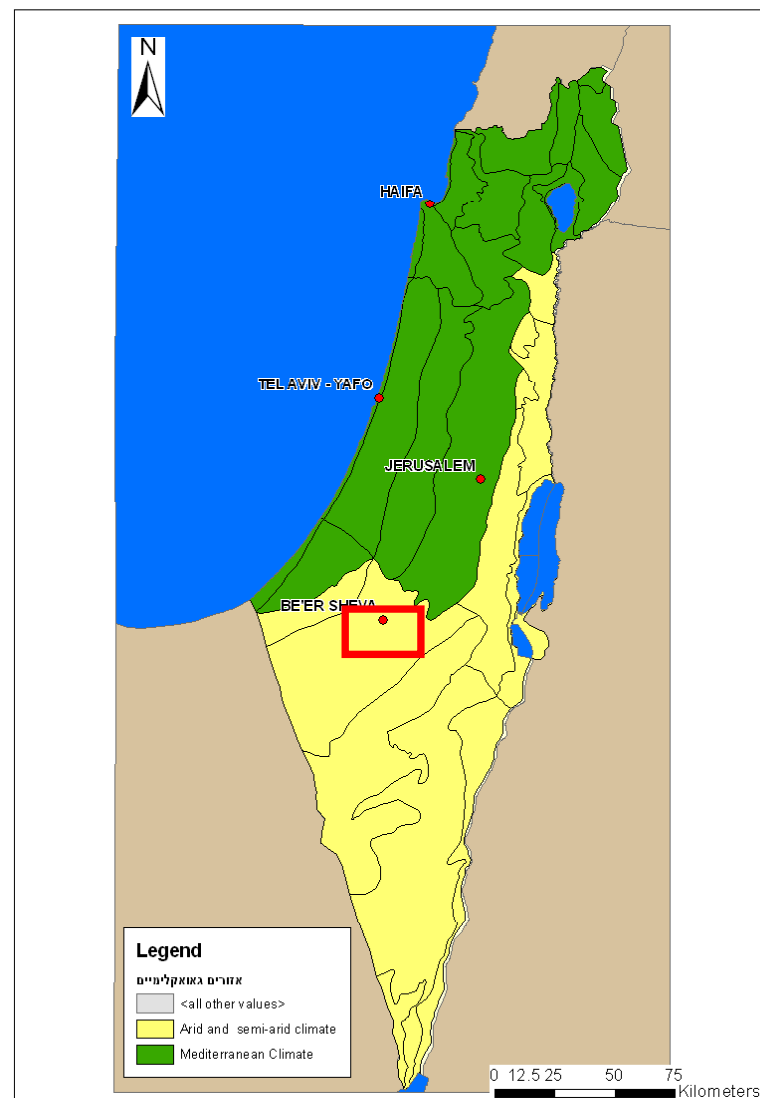
Establish scenarios of hazardous phenomena with direct reference to the changes in objects'/agents' ways of functioning and behavior

Series of droughts and their impact on social-economic scenarios. E.g., frequent droughts may lead to growth of the fraction of areas under the intensive agriculture of the Jewish farmers and supply more lands for establishing new tents and extensive sheep raising by the Bedouin agents

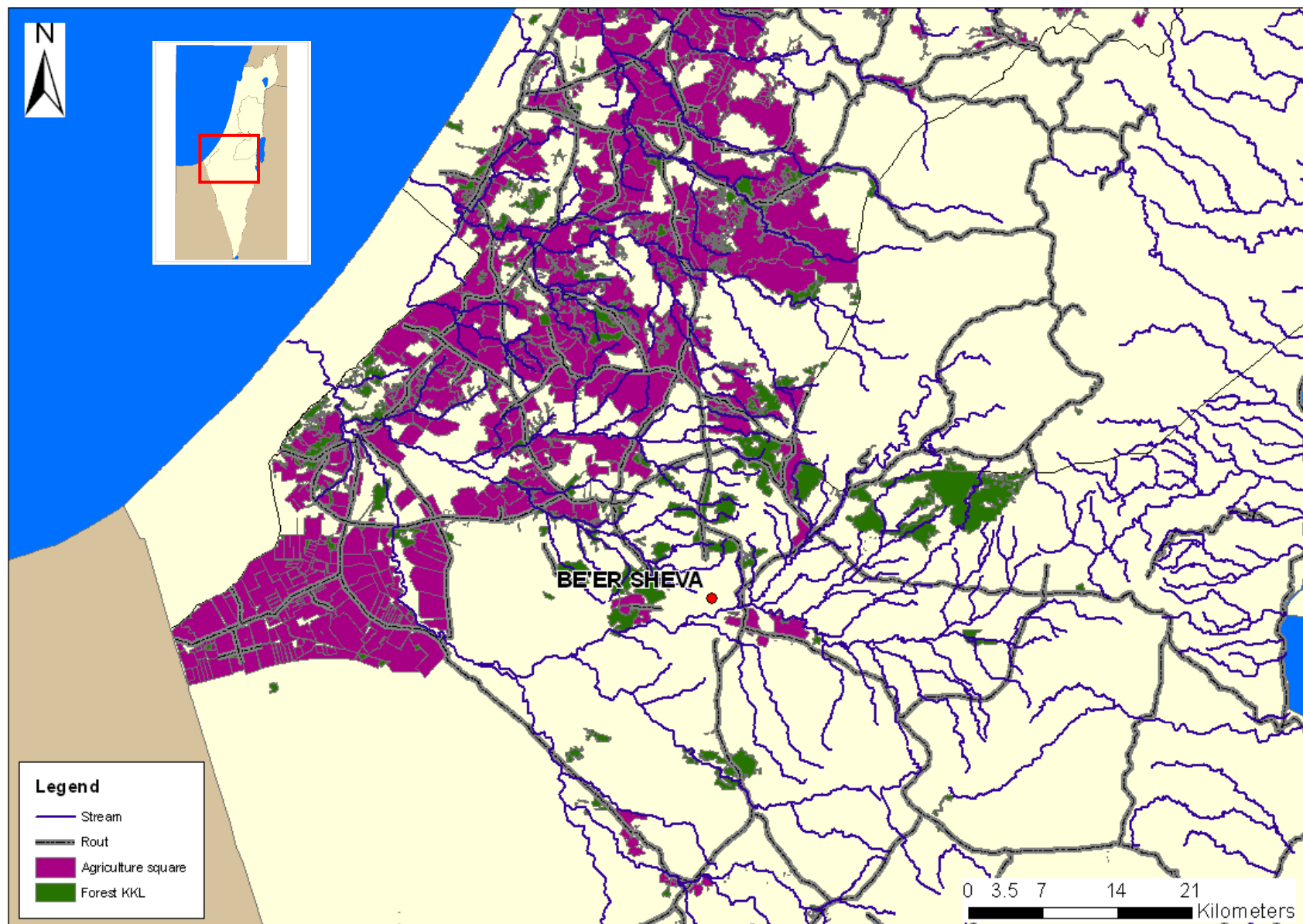
Your system

NEGEV

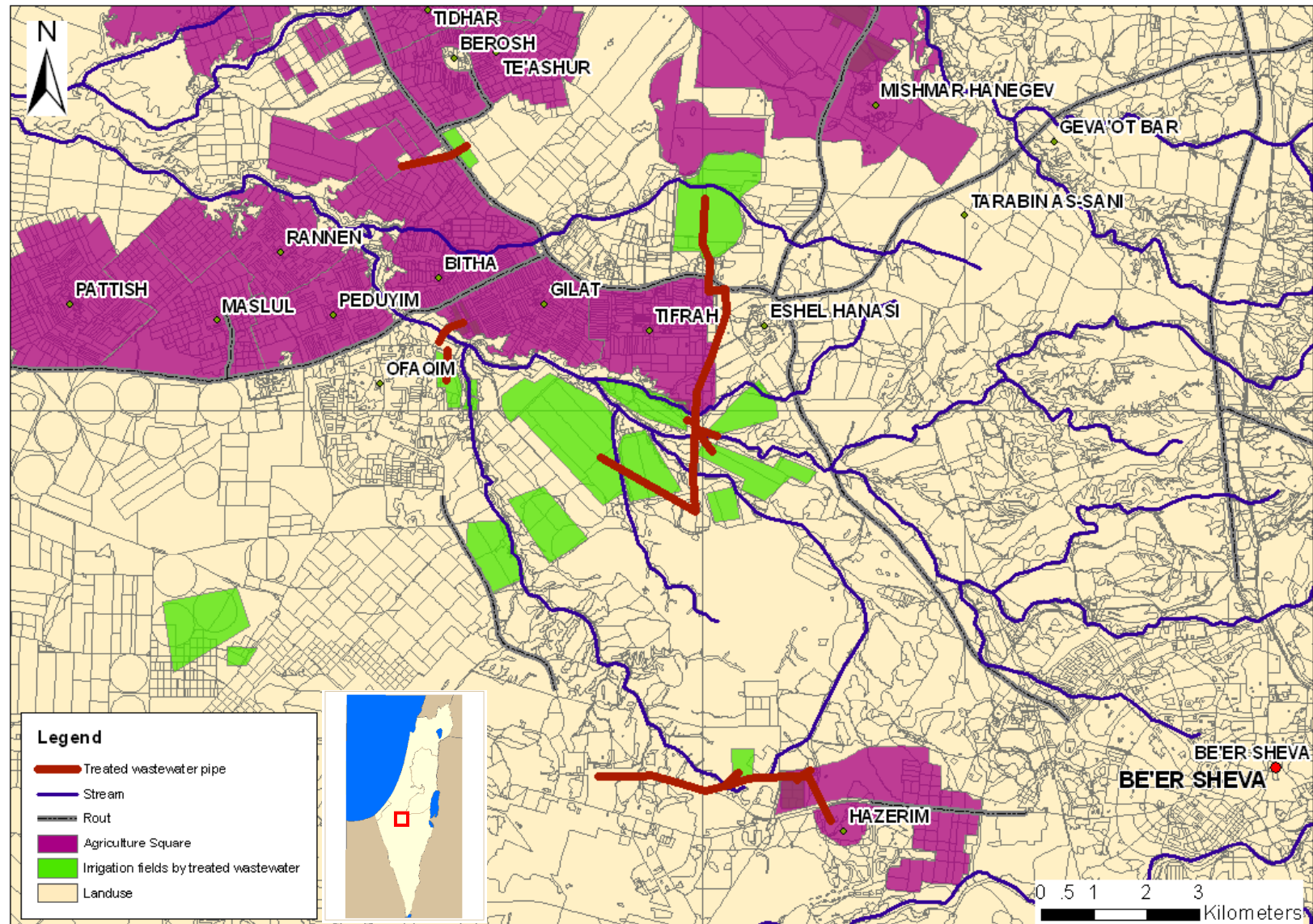
Israel: Precipitation isohyets, measurement stations, main climatic areas



Forests and vegetation

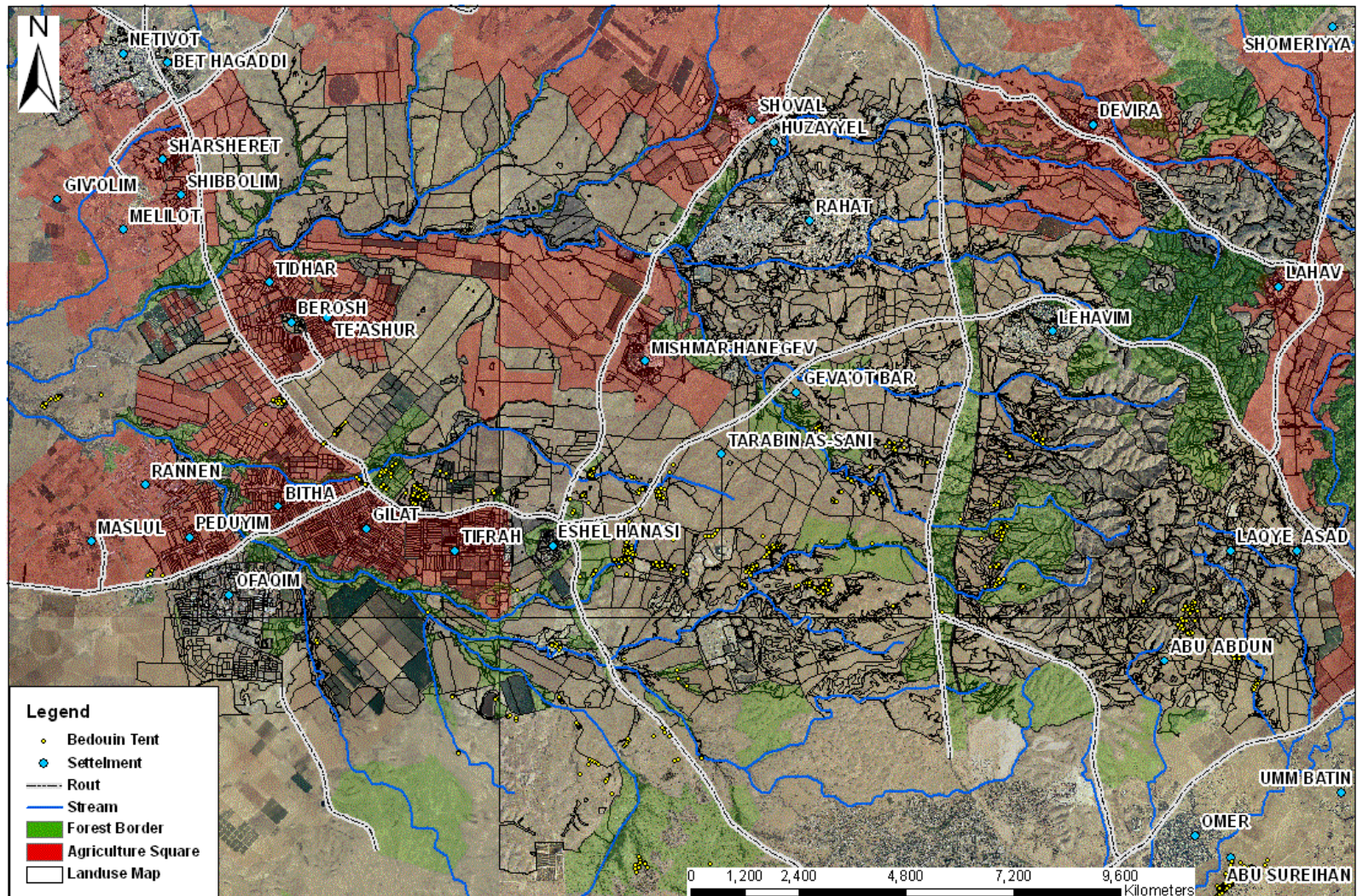


Wastewater pipelines

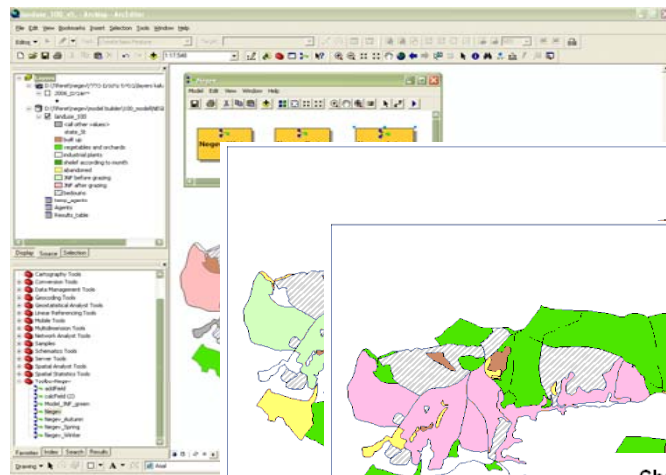
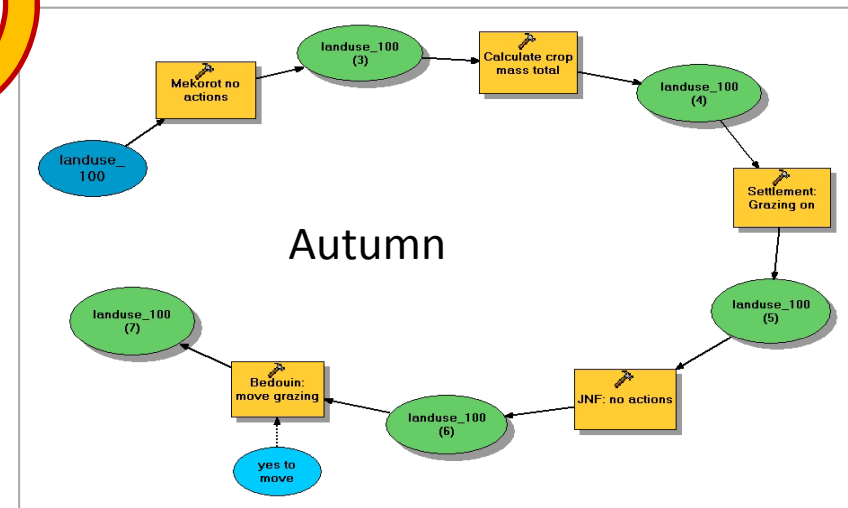
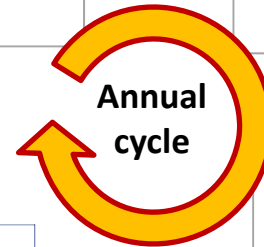
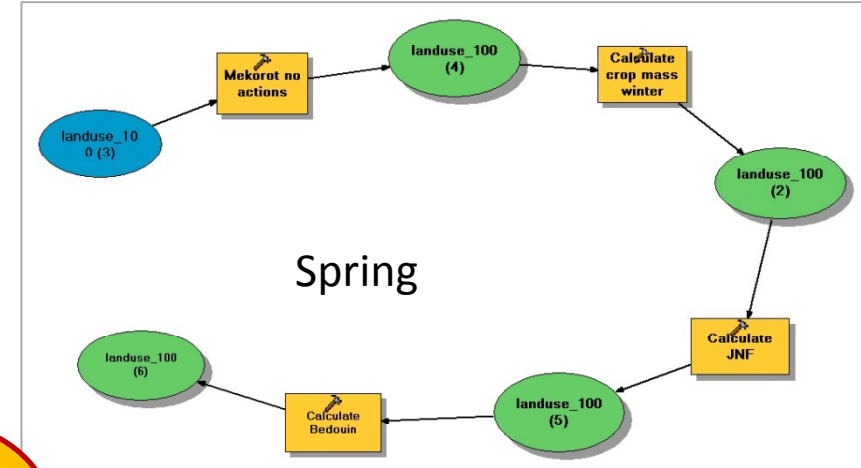
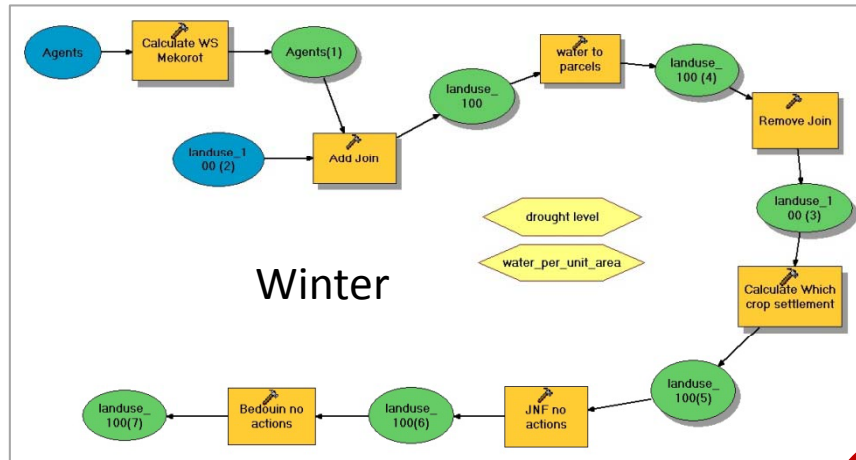




Most important layer: Land use at parcel resolution



What are the available data? Is it possible to construct the model of system's dynamics?



Change of crop mass during years

