



UK Centre for
Ecology & Hydrology



City Explorer Tool – COP26 data demonstrator

David Fletcher (UKCEH)

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UK

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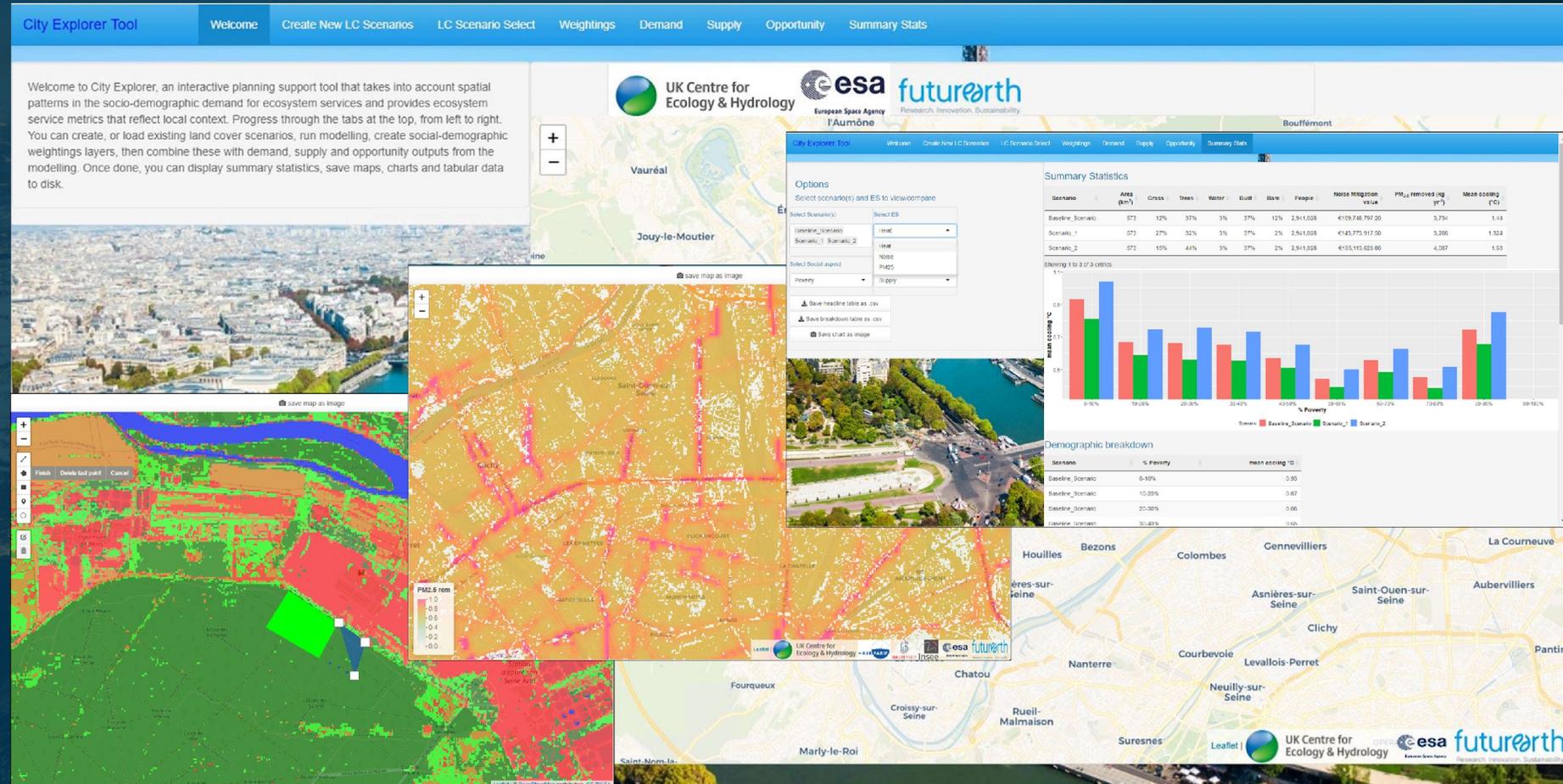


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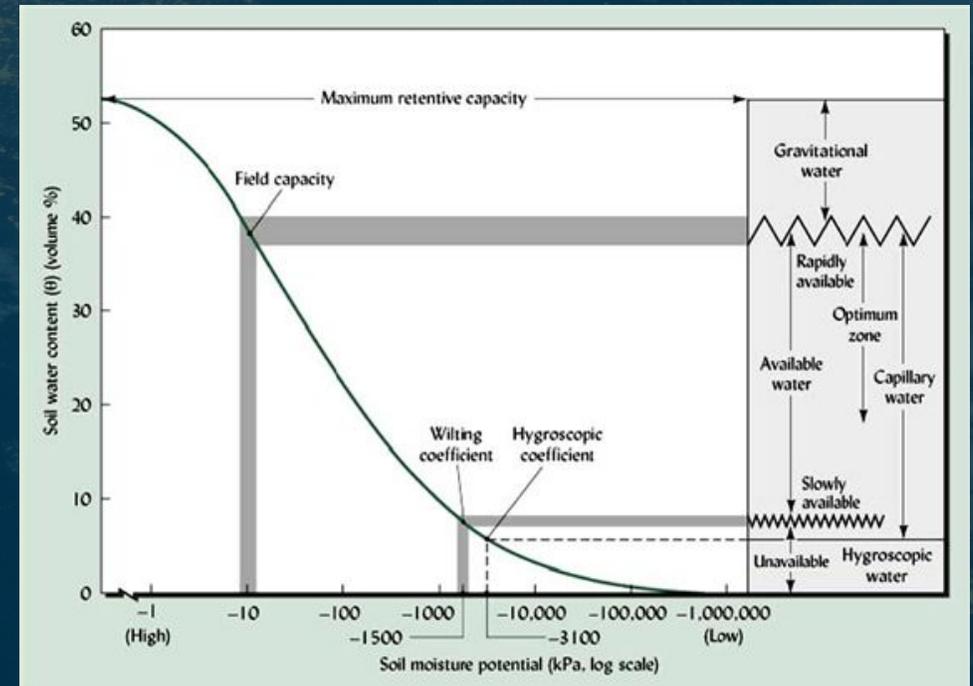
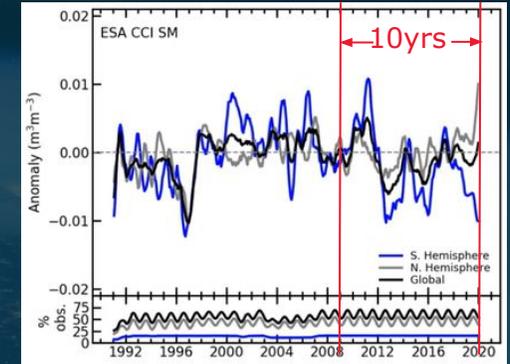
City Explorer Tool - overview



- Web-app aimed city planners & officials
- Combines social data and ES model outputs
- Currently includes 3 ES models relating to urban green & blue space
- Identifies best locations for NBS
- Allows comparison of different planning scenarios
- Identifies social disparities in ES demand and provision

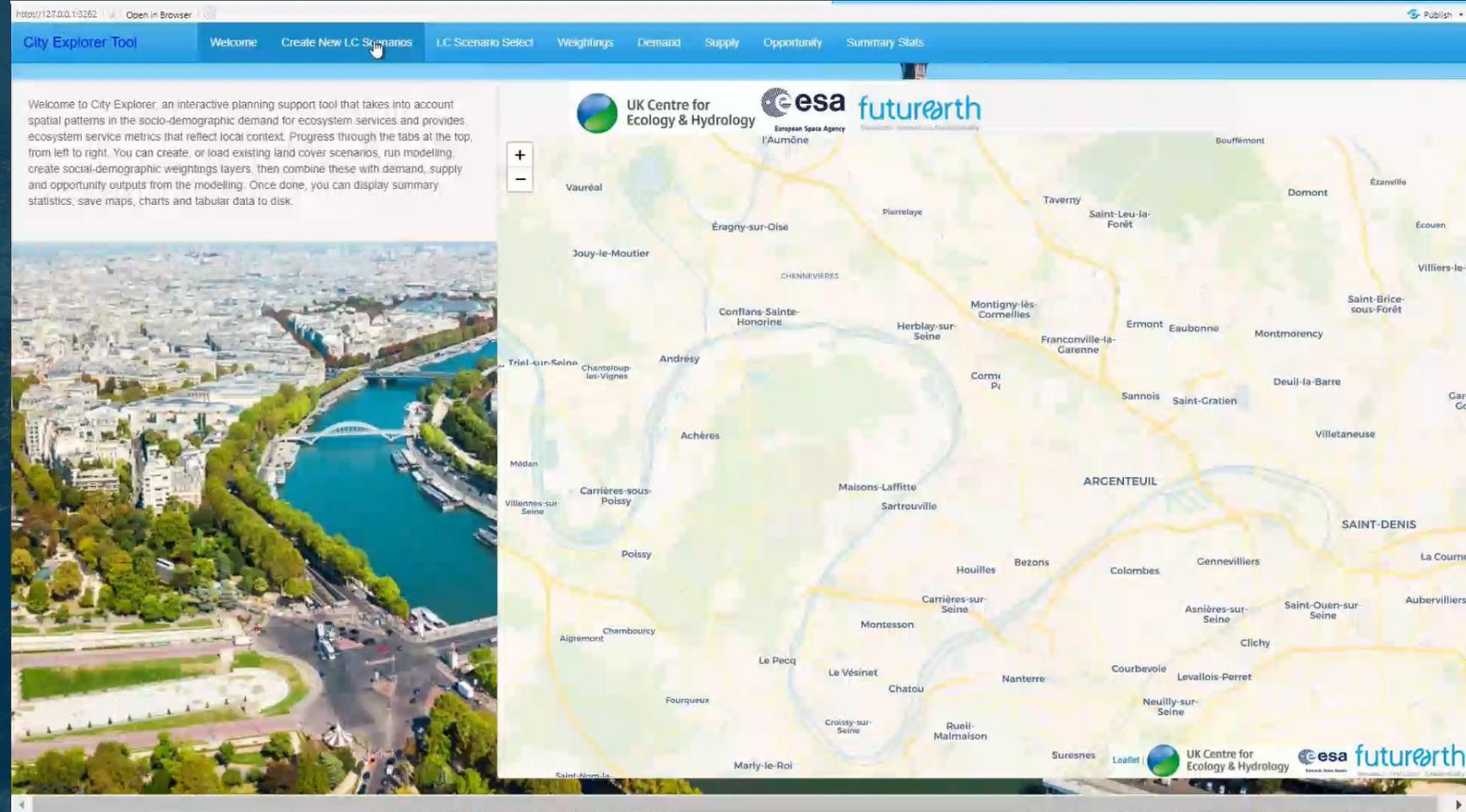


- CCI Soil Moisture (SM) data used in atmospheric cooling model
- Moisture availability curve fitted
- % of maximum evapotranspiration (ET) calculated
- 10 yrs of SM data were used to calculate upper and lower 95% CI, and mean, for the study area
- The model uses the lower 95% CI to determine the atmospheric cooling provided by grassy areas





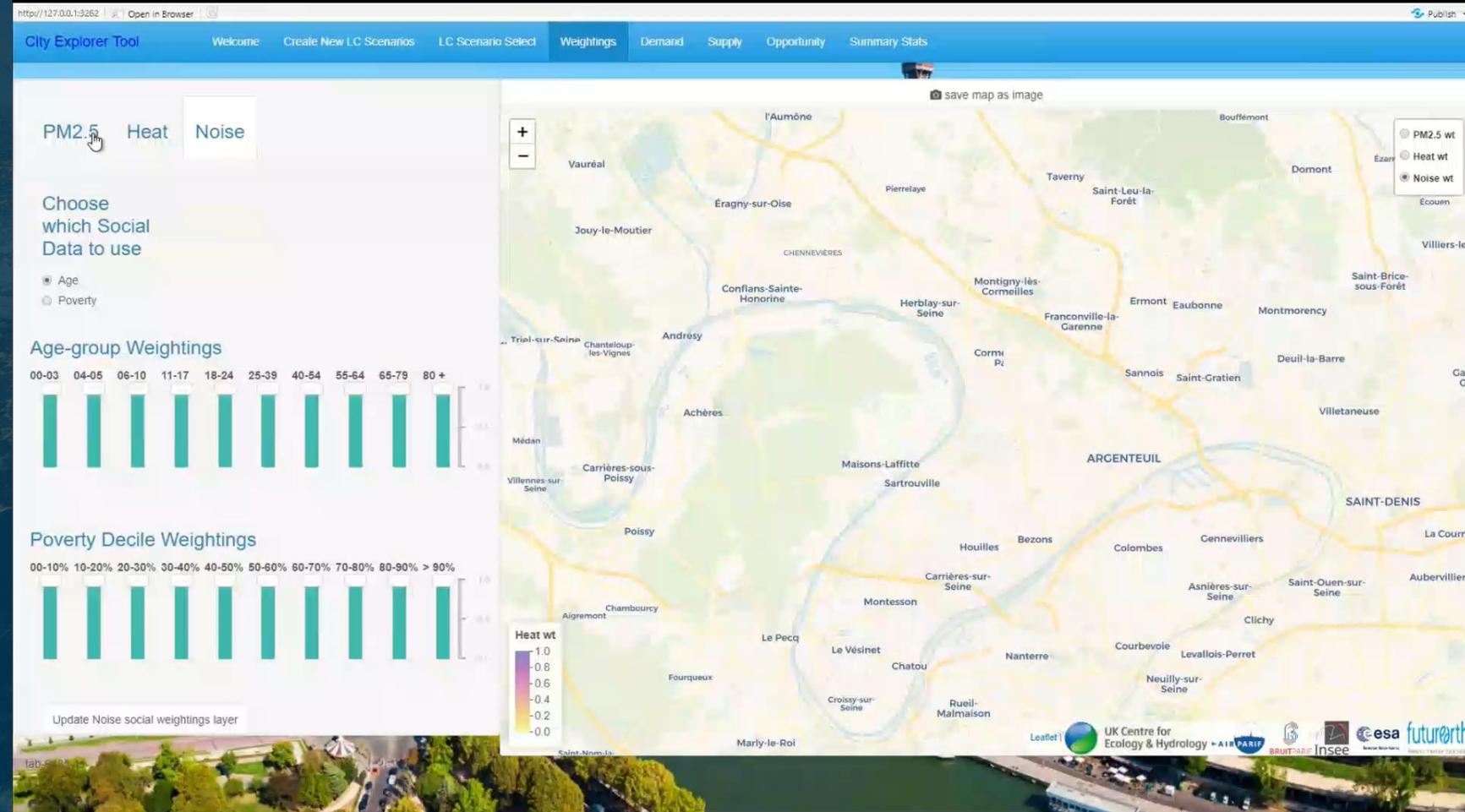
- ES models use Land Cover (LC) as input data
- Users can use current LC (Sentinel - 1 & 2 classification) as a baseline scenario
- Users can edit the LC by drawing polygons and assigning classes
- Save and load scenarios, and run models on selected ones



City Explorer Tool – social weightings



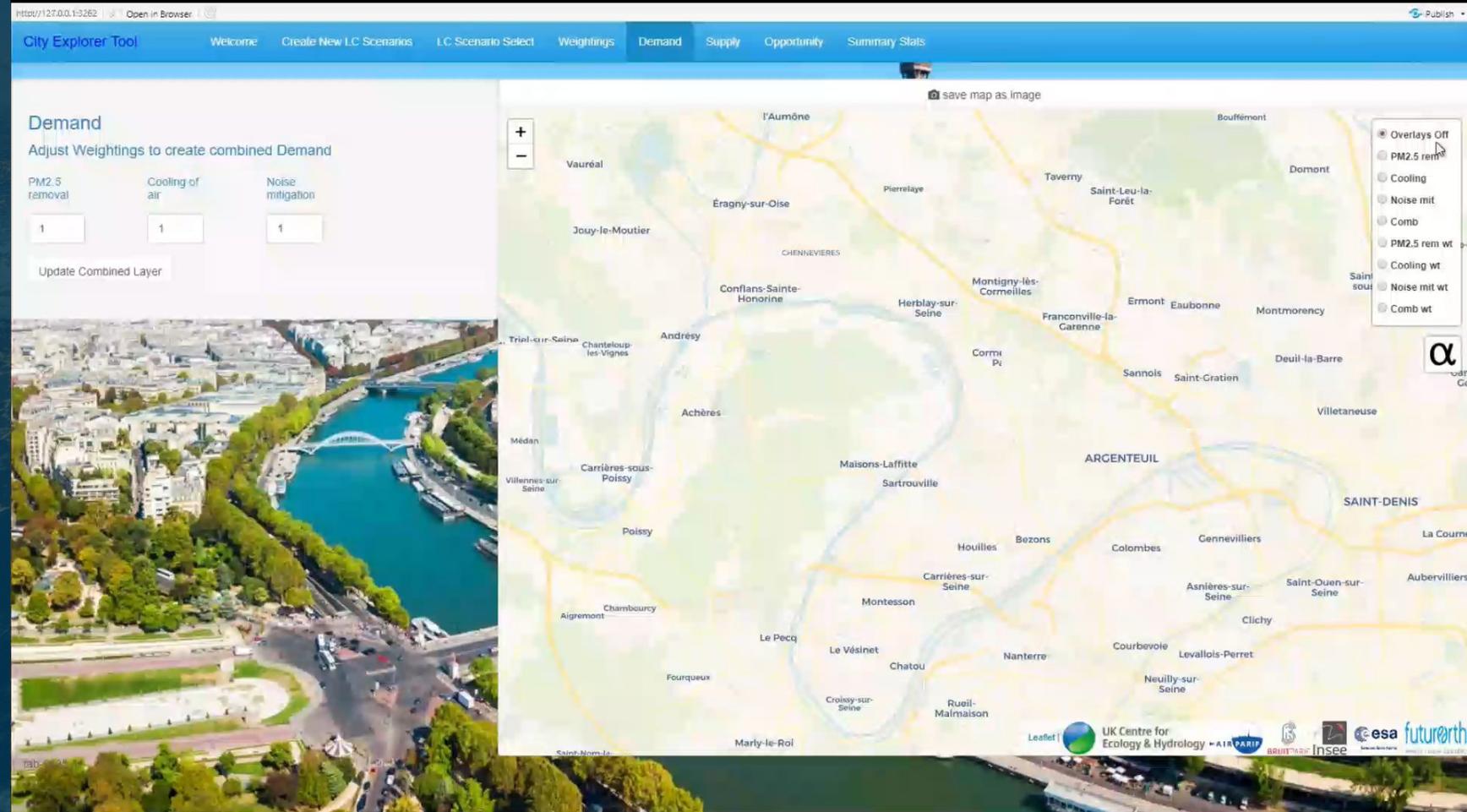
- Currently includes age-groups and % prevalence of poverty
- Alter weights of individual demographic groups
- Create custom weightings for each of the 3 ES



City Explorer Tool – demand and impacts



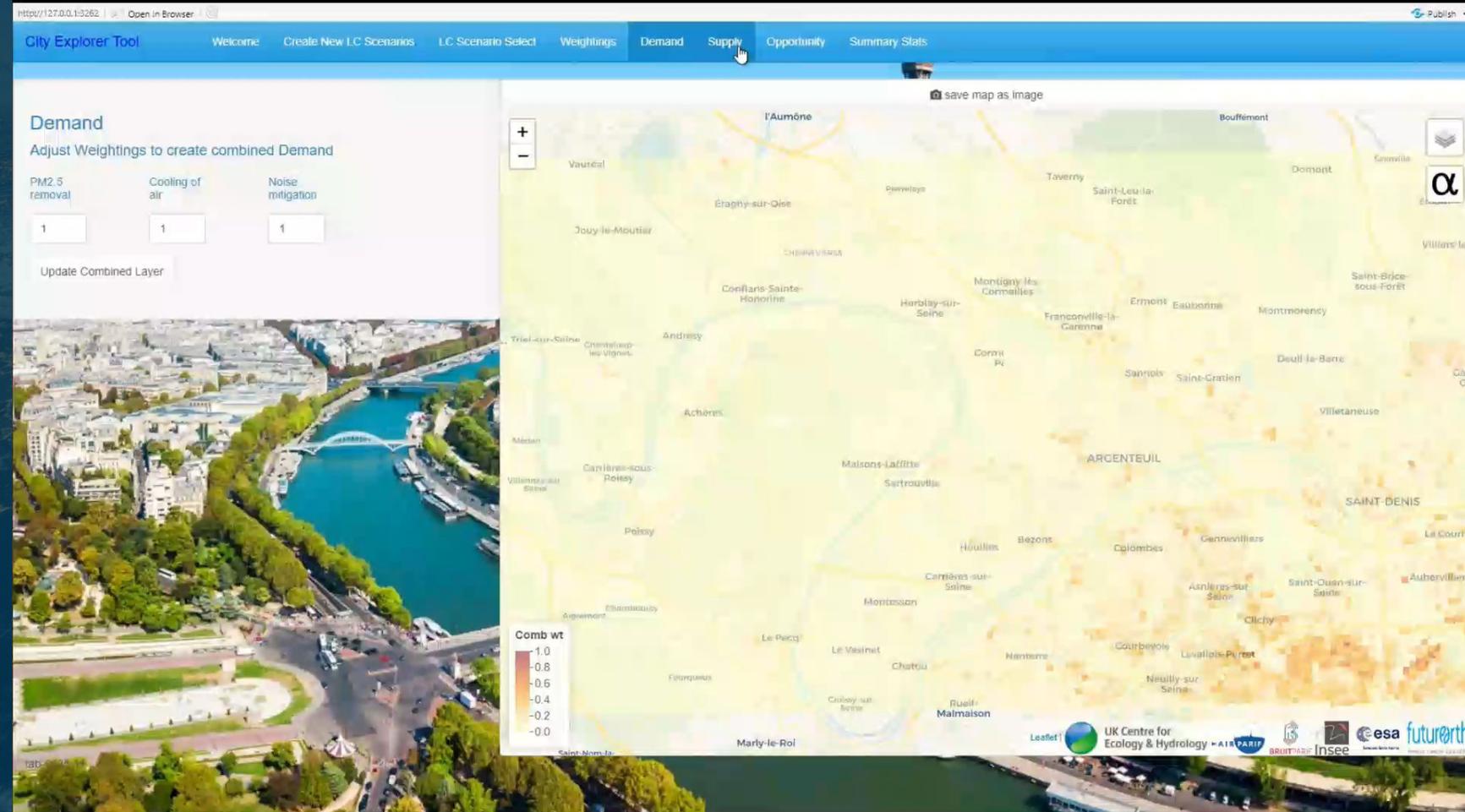
- Maps of the 3 pressures show spatial variation in their severity
- Combined version is generated, using the importance weightings
- The social weightings are applied, to map severity of potential impacts
- A combined version is generated, again using the importance weightings



City Explorer Tool – supply & opportunity



- Green and blue space supplying ES are mapped
- Generally higher values in SE, towards central Paris
- Opportunity maps show locations where greatest supply could be provided by new NBS
- Again, generally higher values in SE, towards central Paris, but also focussed around roads and dense urban fabric



City Explorer Tool – summary statistics



- Summary stats allow comparison of multiple scenarios
- LC class %prevalence, population, total area km²
- ES totals for noise mitigation (€), air pollution removal (kg/yr) and cooling (°C)
- Demand and supply, for a typical person within a social group (for each ES)
- Saved outputs to insert in reports

City Explorer Tool

Summary Statistics

Options

Select scenario(s) and ES to view/compare

Select Scenario(s) Select ES

Baseline_Scenario Heat

Select Social aspect Select supply or demand

Age Supply

Save headline table as .csv

Save breakdown table as .csv

Save chart as image

Demographic breakdown



- Make available for testing, by project partners
- Allow users to upload spatial datasets, to constrain opportunity outputs
- Include health metrics (e.g. DALY)
- Add more ES models – toolkit layout
- Add to thematic resolution of input LC data
- Make a simplified version for educational purposes





Thank you for listening

Any questions?

dfletcher@ceh.ac.uk

