

How to use the ‘Strategies for Urban Ecosystem Services Generation’ Map

- Software used: Kumu (<https://kumu.io/>)

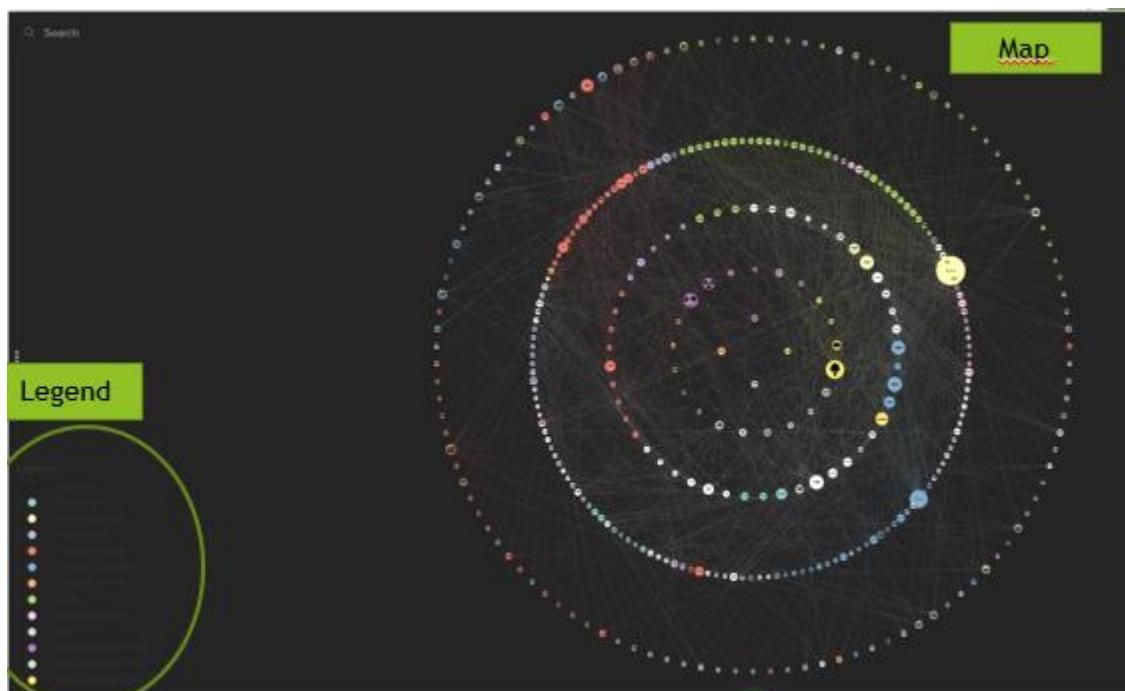
1. Open the map via the link shared with you

Link: <https://embed.kumu.io/0853bdea62a409d6dc7f00a636bc6457>

2. Map structure

2.1 Start screen

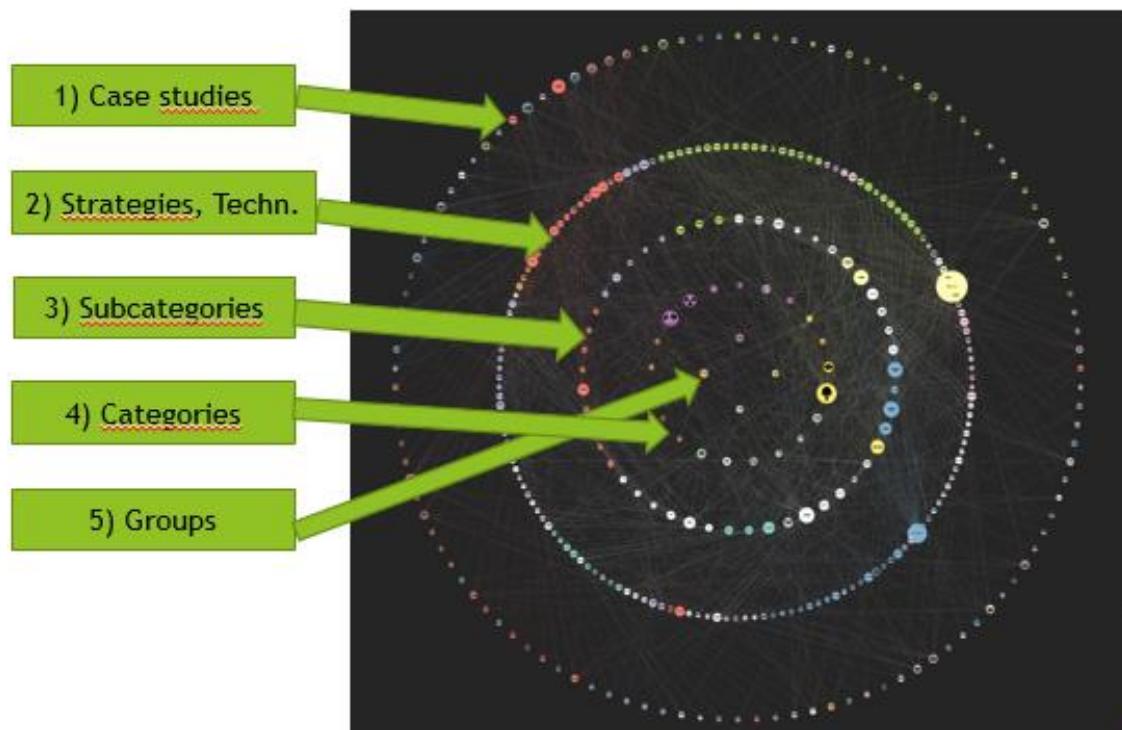
The first image you will see contains a mind-map and a legend that explains the colours in the map (Image 1)



2.2 Map circles

The map itself consists of five increasing circles (see Image 2). The most inner circle (5) represents the four existing groups of ecosystem services (Provisioning Services, Supporting Services, Regulating Services, and Cultural Services). The second inner circle contains the 21 different ecosystem services categories for urban environments which are described in Maibritt Pedersen-Zari’s book “Regenerative urban design and ecosystem biomimicry” (2018). Several categories require subcategories which are presented in the third inner circle. The categories and subcategories connect with the second outer circle which contains a thorough collection of existing and potential design strategies, methods, technologies and techniques for a sustainable urban development that produces ecosystem services. From

there, selected case studies were added in the fifth circle that connect with various design strategies, methods, technologies and techniques, as well as in some cases with categories or subcategories.



3. Map functions

3.1 Element connections and sidebar

When hovering over an element (“bubble”) all its connections light up (Image 3).

The screenshot shows a network visualization interface. On the left, there is a sidebar with the title "Fuel and energy" and a "PROVISIONING SERVICES" section featuring a plug icon. Below this are sections for "COMMUNITY" (2), "FURTHER READING" (ADD FURTHER READING), "IMAGE" (camera icon), "LINKS" (link icon), "REFERENCES" (book icon), "VIDEOS" (camera icon), and a "New field" button. At the bottom of the sidebar are "DEGREE" (36) and "METRICS:LAST" (0.972). To the right of the sidebar is a network graph with many nodes connected by lines. A red arrow points from a red circle on the sidebar to a node in the network, which is highlighted with a red glow, demonstrating the "light up" effect mentioned in the text. A green box labeled "Open sidebar" is overlaid on the sidebar area.

Image 3: Hovering over an element causes connected elements to light up. Clicking on an element allows to open the sidebar on the left side to learn more about the element.

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When clicking on the selected element you can open the sidebar by clicking on the three dots on the left side of the screen. The sidebar contains the element label, an image, a description, further reading and/or links and occasionally also a video (Image 4).

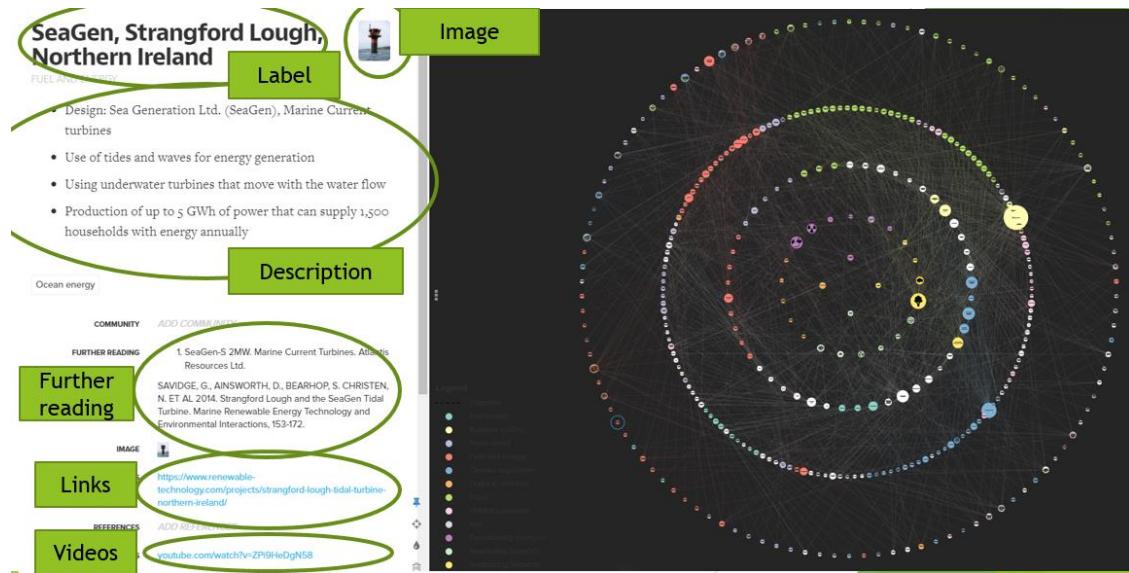


Image 4: The sidebar on the left shows the selected element label (here the example of “SeaGen, Strangford Lough in Northern Ireland” is presented), an image, a description, further reading and/or links and occasionally also a video.

3.2 Display of selected element connections

In order to better analyse the connections of one selected element you can click on the “focus” function on the right side and all not connected elements and connections disappear (Image 5).

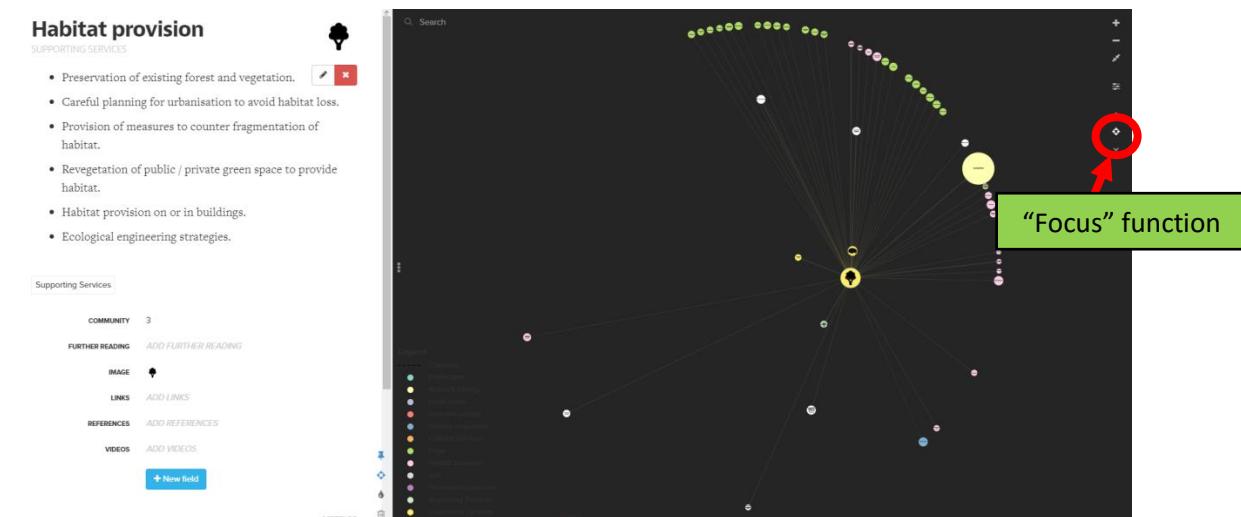


Image 5: The sidebar on the left shows the selected element label (here the example of “SeaGen, Strangford Lough in Northern Ireland” is presented), an image, a description, further reading and/or links and occasionally also a video.