

Assignment 2: Concept Map (200 points)

Objective: Develop your ability to analyze complex problems, issues or needs, assess the relative importance of inter-connected concepts and linkages, and organize your understanding of the different components of a complex problem issue or need into a holistic, internally consistent and logical presentation of key ideas.

In this assignment your target audience for the presentation of your concept map consists of professionals in government, academia, or advocacy groups whose members have expertise in community development. E.g., this is not a general public audience. This is important because you always need to match the language you use and the content of any visuals in your presentation to the audience. This presentation can be fairly detailed and specific and definitely can include technical terms that an “average citizen” might not know.

A concept map is a visual presentation of the relationships among a number of concepts, processes, or events. The map focuses on a single concept, process or event of interest – in your case one of the challenges to sustainability that we discuss in this class. Related concepts and/or processes are tied to the central focus of the map through a linkages represented by lines with a word or phrase that describes the nature of the relationship between two components. Concept maps start with broad, general relationships and build on them to create complex visual models of how many factors interact to produce a given outcome. Here are some resources about concept maps.

<http://cmap.ihmc.us/docs/theory-of-concept-maps.php> Good explanation. I think the company sells software for making concept maps.

https://www.youtube.com/watch?v=o2Js_9-ek7o I like this tutorial on concept mapping because it focuses on using the process to visually organize knowledge. This helps us systematize and organize what we learn. This is what I want you to do in this assignment. It's about 15 minutes long and worth hearing because it gives a lot of good ideas about how to use colors and types of connectors to make a more explanatory and useful concept map.

<https://www.youtube.com/watch?v=axZD1WMPRIo> This is from a class at the University of Maine. It shows how to use paper, Microsoft Word and Google Drive to create concept maps. It deals with the actual construction of the concept map. It is a good step by step procedure and also has good instructions on the use of the various programs to make one.

Your task in this assignment is to create a concept map, drawing upon the ideas we have discussed in class, required readings, and additional resource materials (research reports, other published articles, books, data, official statistics, etc.) that you find. **Your map should show how social, technological, environmental and economic factors interact to produce a challenge or threat to the sustainability of communities, factors like insufficient availability of water, violence, resource depletion.** Make sure you consider what we learned in the first part of the course about the role of population growth, urbanization, technology and globalization and how they are reflected in the challenges identified in the more recent weeks. Most people find it helps on this assignment to have a model of a specific community or type of community in mind for the exercise. This could be small rural communities or underserved communities in large metropolitan cities. Your entire team will have to share a common description of the kind of community. It may work best if you use an

example of a community that at least one of you knows well.

You will present your concept map in class on the day presentations are indicated in the course schedule. Submit the map and a **single-spaced Word document (1,000 words maximum, about two pages of single-spaced print)** with the information requested in item 6 below. Submit the map as a PDF document with the title

LastName1_LastName2_LastName3_Concept_Map. Title the two-page document

LastName1_LastName2_LastName3_Map_Explanation

Here is a general procedure for making a concept map.

1. State a challenge or threat to sustainability that will serve as the focus for your concept map. I suggest that you select a precisely defined (somewhat narrow) threat or challenge to sustainability in the community or type of community you have chosen. “Biodiversity loss” is too broad. “Decline in population of wild animals important in the local diet” would be better. Concept maps get complex quickly and the broader the focus of the map, the more complex the map becomes. One good way to get started on the map is to develop a focal question about the threat of interest. For my example, the question might be “What drives the local extinction or decline of wild food animals in this area?” The question will help you focus on relationships between processes, concepts and the threat.
2. List the 5 to 10 “large scale” factors that you can identify that drive the process of interest to you. These should be readily identifiable to you – probably even before you conduct a literature review. They will probably include some of the key drivers that we have discussed in the course and other drivers that you identify through your own expertise. These “major” or “large scale” factors form the first tier of your map. These large-scale factors must reflect the major challenges to sustainability that we will have discussed and incorporate examples of at least three of the processes driving the Anthropocene Epoch (globalization, population growth, technological development, urbanization). Your objective by the end of this process is to have articulated three to five major factors that contribute to the core issue of interest. Portray these as major “clusters” of related concepts that all affect the core issue directly.
3. Now elaborate each of these clusters. Add detail. Add secondary processes that contribute to the major factors or processes that you have already identified. For example, in my example of the disappearance of a wild food animals, poverty would be a major process in my map because poverty drives people to rely on hunting for food. In-migration to the area might be another because this increases the demand for “bushmeat”. I might have unemployment and low-wage jobs as causes of poverty. Although these factors may not affect the decline in the food species directly, they are important social drivers of the phenomenon. Further, these factors interact with each other. Unemployment tends to grow as a result of in-migration of people with limited skills.
4. Continue to build your concept map with at least one more tier or layer of factors that explain the core challenge of interest. That is, your final map should have the core challenge or threat of interest, at least three major clusters of factors/processes that **directly** affect the core challenge, and at least two more “layers” or tiers of factors in each of those clusters. For example, in my example, the third tier might include things like “poor schools” because poor schools create poor job skills, which creates unemployment, which creates poverty – which finally directly affects hunting for food. You may include as many layers or tiers as you want, but three tiers are the minimum. You can have too many tiers. Ultimately, I suppose “everything is related to everything” and that makes for an incomprehensible concept map. So

– stop when the relationships become too tenuous for you to be able to explain them clearly.

5. Think of your concept map as a visual explanation of a threat or challenge that has complex roots. Imagine that you are using your concept map to explain the challenge in a community meeting where many citizens have little or no knowledge of the processes and concepts that you want to explain or perhaps to a large class of freshmen in college in a course about sustainability. Your map should make the relationships clear to the audience. This kind of clarity – without losing detail and critical relationships – is what I want to see in your concept map.
6. The document accompanying the concept map has four components. (A) It states the focal challenge or threat (or question) you used as a starting point for the map. (B) It describes how/why you selected the concepts included in your concept map. (C) It explains the overall logic in the organization of your map (e.g., what constitutes the first level of concepts, second level, etc., the rationale). (D) It provides a description of the key points or arguments that you want to make with the map. Include a bibliography of all materials used to develop the concept map (not part of the 2-3 page explanation).

Assessment Criteria for the Concept Map (Including the material you submit to me and your oral presentation)

Criteria	Possible Points	Your Points
<p>Concepts Identifies key concepts, both those that are directly related to the threat or challenge and especially important concepts that are indirectly related Includes concepts that reflect the range of challenges to sustainability that we have discussed (biological, social, technological, etc.) Provides a clear but succinct definition of each concept</p>	30	
<p>Structure Has a non-linear structure that provides a clear visual presentation of key ideas Includes multiple groupings of concepts and concepts included in each grouping are logically consistent¹ Both simple and complex connections between concepts are mapped Branching is complex and complete and more specific concepts are connected to more general concepts Linking words demonstrate conceptual understanding Links are precisely labeled</p>	40	
<p>Content Clearly identifies the main challenge or threat and subsidiary, embedded, or implicit aspects of the threat Shows how different aspects of the challenge or threat are related to each other. Demonstrates complex ideas and provides a good depiction of the relationships between concepts and linkages on the map Map makes clear the designers' overall arguments about the causes and relationships involved in generating the challenge Map provides insights into ways to go about addressing or solving the problem, issue or need</p>	40	

Presentation Information is presented clearly and fosters understanding Uses techniques like color, diagrams, line style to facilitate understating complex concepts portrayed in map	30	
Explanation of Map Statement of threat or challenge is precise and focused Selection of concepts to include and emphasize in the map is well justified based on the published literature about the challenge and its potential causes There is a logical organization to the map that ties concepts together and avoids over-simplification of the processes involved Rationale is well explained and easy to understand The arguments illustrated in the concept map are clearly identified and explained	30	
Draws upon a wide variety of reputable and valid resources in developing the concept map Uses APA style for all references	30	
Total	200	

¹ Groupings are the ways concepts can be linked or joined together. There are three types of groupings: Point groupings: a number of single concepts emanating from one concept 2. Open groupings: three or more concepts that are linked in a single chain 3. Closed groupings: concepts that form a closed system [a loop].