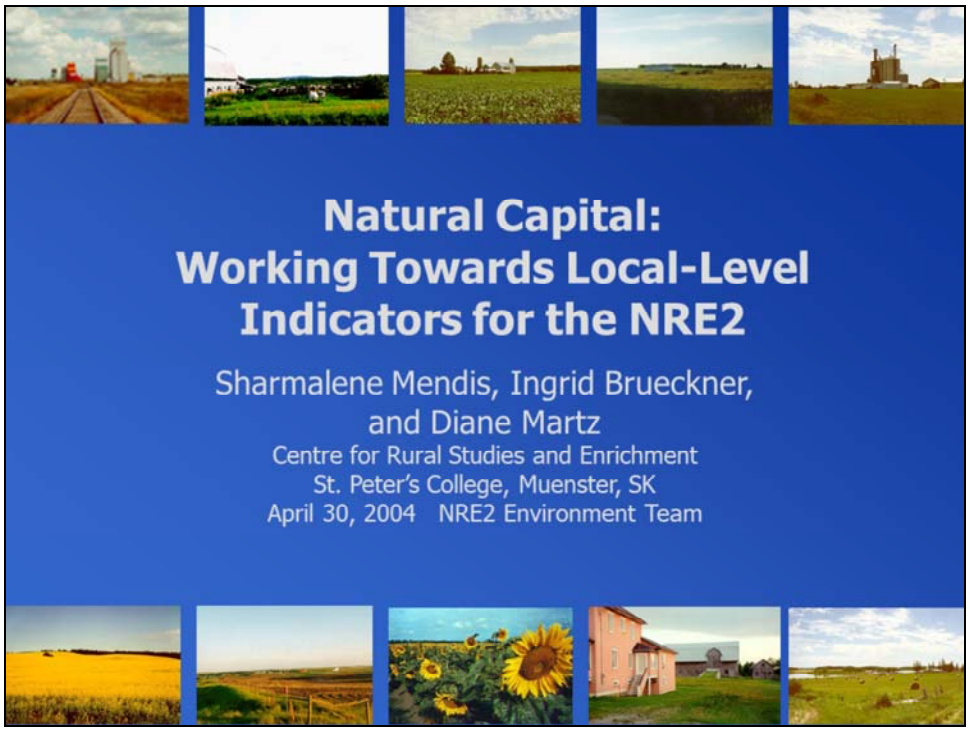
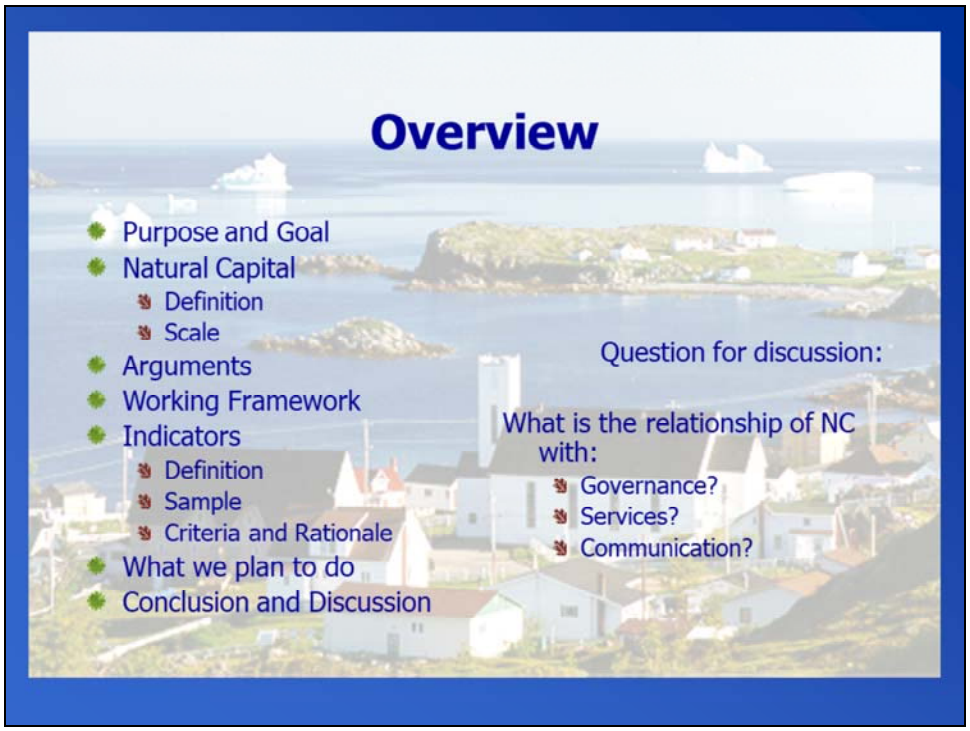
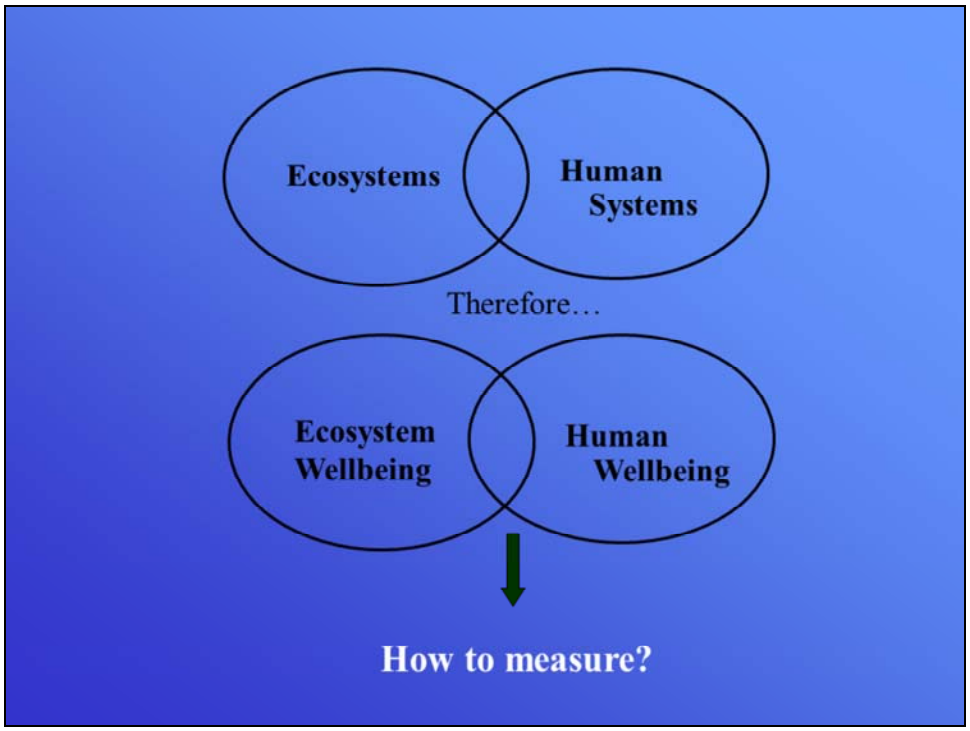


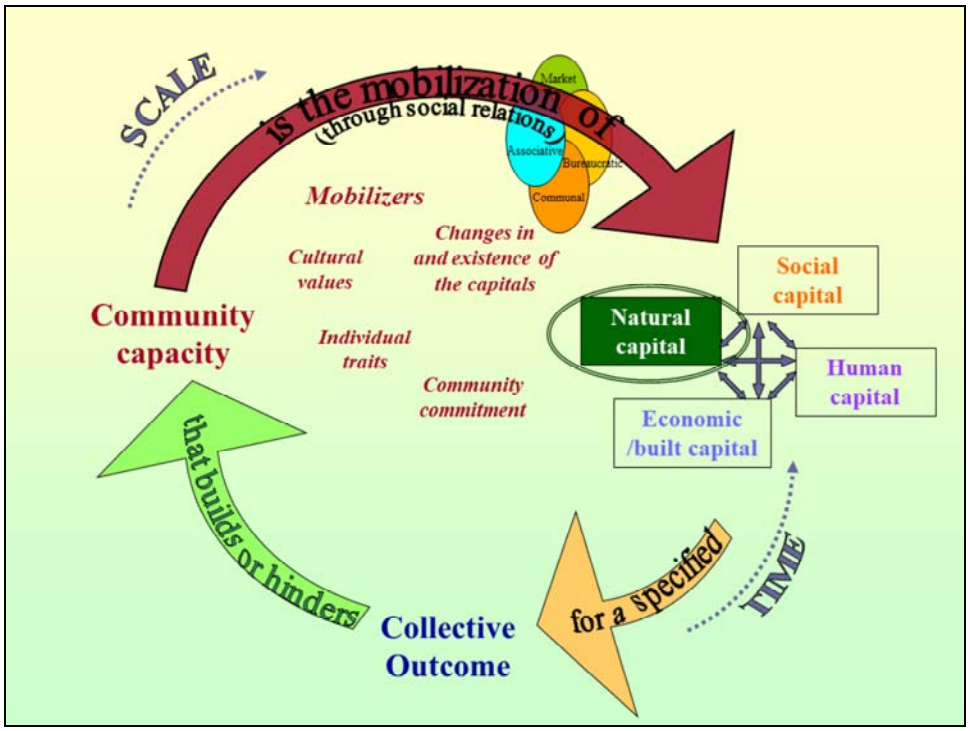
Good afternoon. It is a pleasure for us to have the opportunity to present our project on Natural Capital: Working Towards local-level Indicators for the NRE2. My name is SM and this is my research partner Ingrid Brueckner. We are being supervised by the site coordinator for Alberta and Saskatchewan study communities, Diane Martz from the Centre for Rural Studies and Enrichment in Muenster, SK. You may recognize the pictures in this presentation from the NRE2 website.



We will first go over the purpose and goal of our research before presenting a definition of NC that we have pieced together from the literature. We will then briefly touch on issues of scale before running through some arguments for and against the use of the term NC, and then present our working conceptual framework of NC. We will offer one definition of indicators along with sample indicators that fit into our conceptual framework, criteria for choosing indicators, and a rationale for their use. Finally, we will conclude by conveying what we plan to do next and open up the floor for discussion. A question we will pose to you at the end of the presentation is: What is the relationship of NC with the other themes of the NRE2 project – governance, services, and communication? We will leave you to think about this as we go through our presentation.

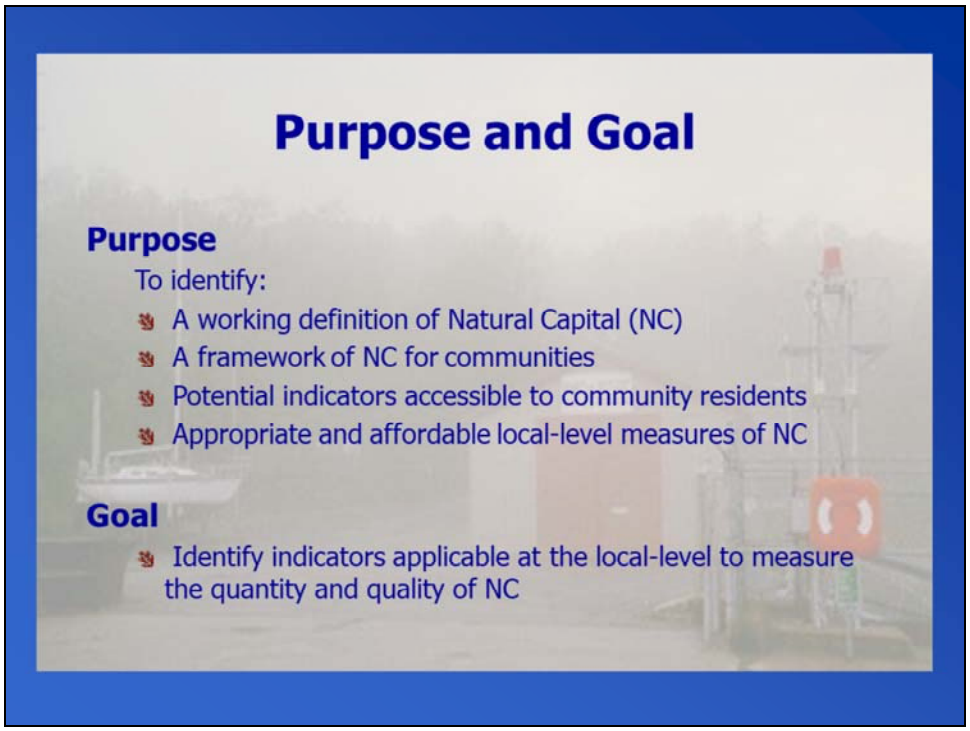


Systems theory and the concept of wellbeing provide the context in which we place NC. Ecosystems and human systems are interconnected, therefore ecosystem and human wellbeing are inextricably linked. If we couch our research in the sustainability literature, one assumption is that the goal is to increase, or at the minimum, maintain, wellbeing over time. But in order to do this, we need to know what ecosystem wellbeing is and how to measure it so that we may monitor changes over time, thus tracking progress towards increasing ecosystem wellbeing. One way of approaching this problem is by considering ecosystems and human systems in terms of community capacity, which happens to be the subject of my master's research.



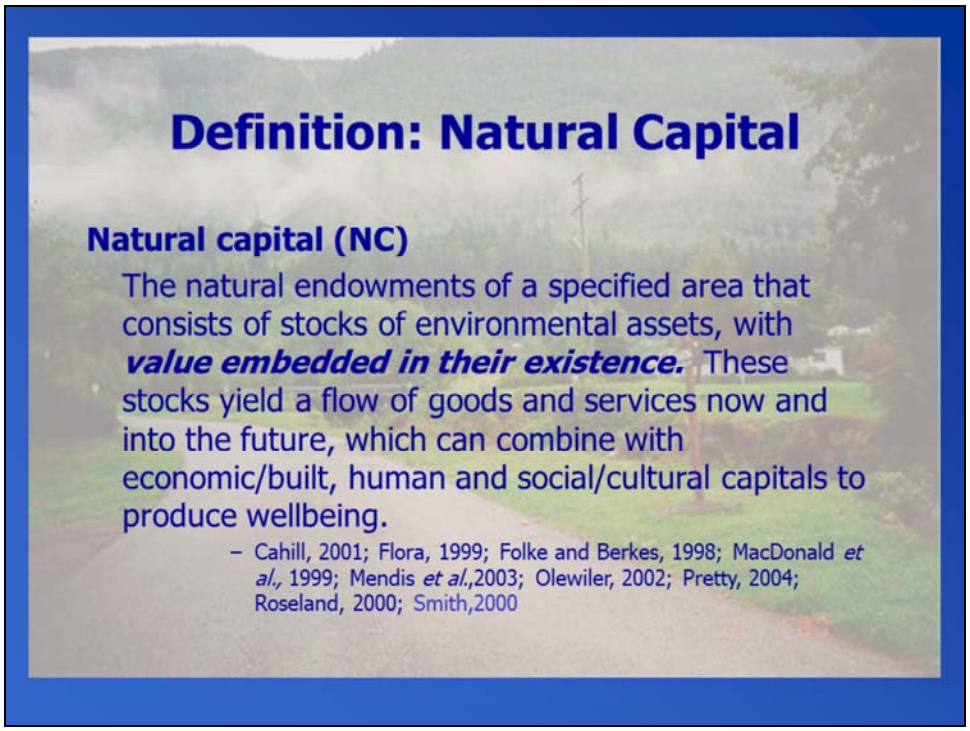
This is an illustration of the framework I developed that incorporates the NRE2's conception of cc as you can see with the inclusion of social relations there at the top.

CC is a useful framework because it addresses a community's ability to respond and adapt to change, meet the diverse needs of residents, and create and take advantage of opportunities. This capacity then is important for rural communities undergoing a socio-economic transition. Working from the left and clockwise, cc is the mobilization of a community's resources, organised as capitals, through the social relations from the NRE2's work, for a specified collective outcome. This outcome can then either build or hinder subsequent cc. This cycle works at different scales –from the individual to the global-and over time. Like the NRE, I view this as a continuing spiral. In the middle I have identified what I have termed 'mobilizers', aspects that spur people to act for that collective outcome. You see that NC is highlighted here – that is the box that Ingrid and I are focusing on and attempting to decipher.

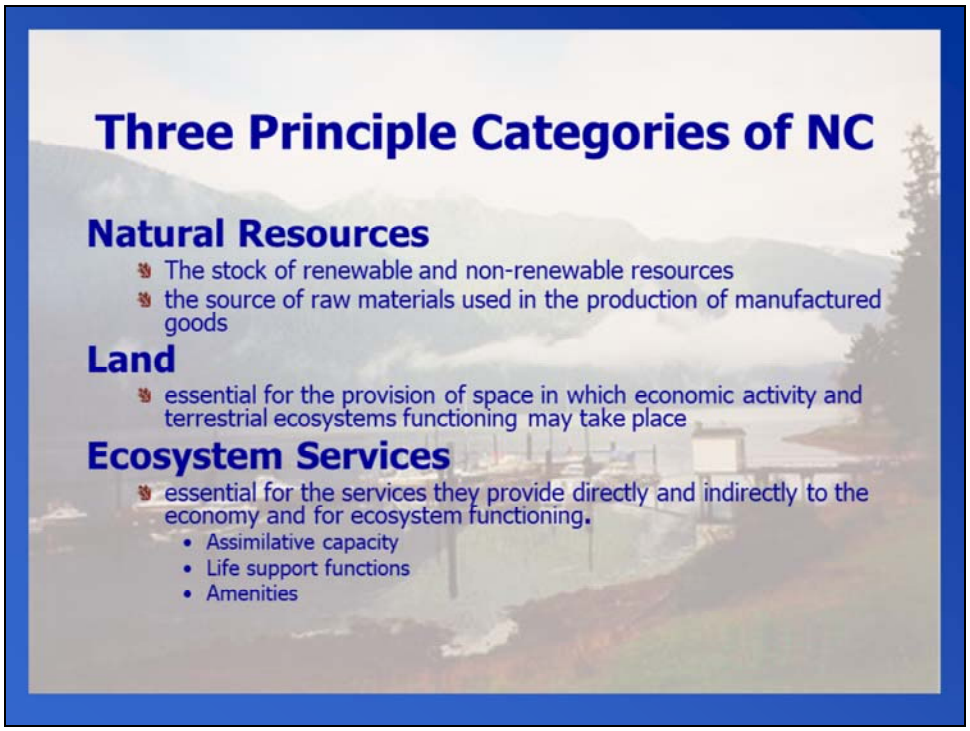


The purpose of our research is…

The overarching goal is…within the context of wellbeing.

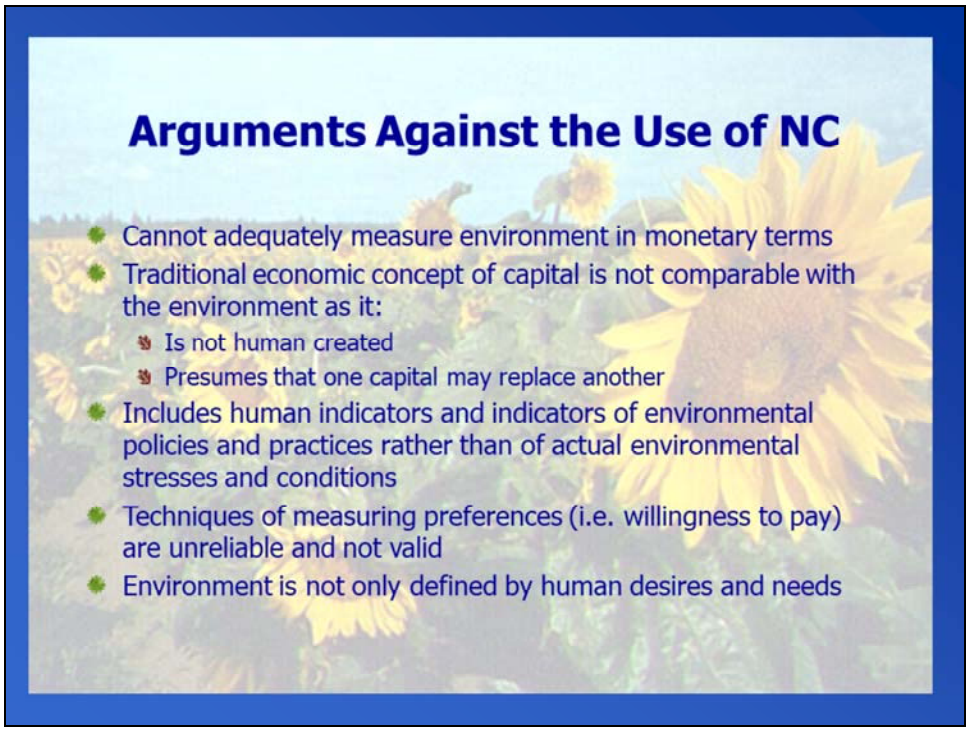


Our definition of NC has been informed by several sources. Emphasis on what we have added to what previous definitions left out.

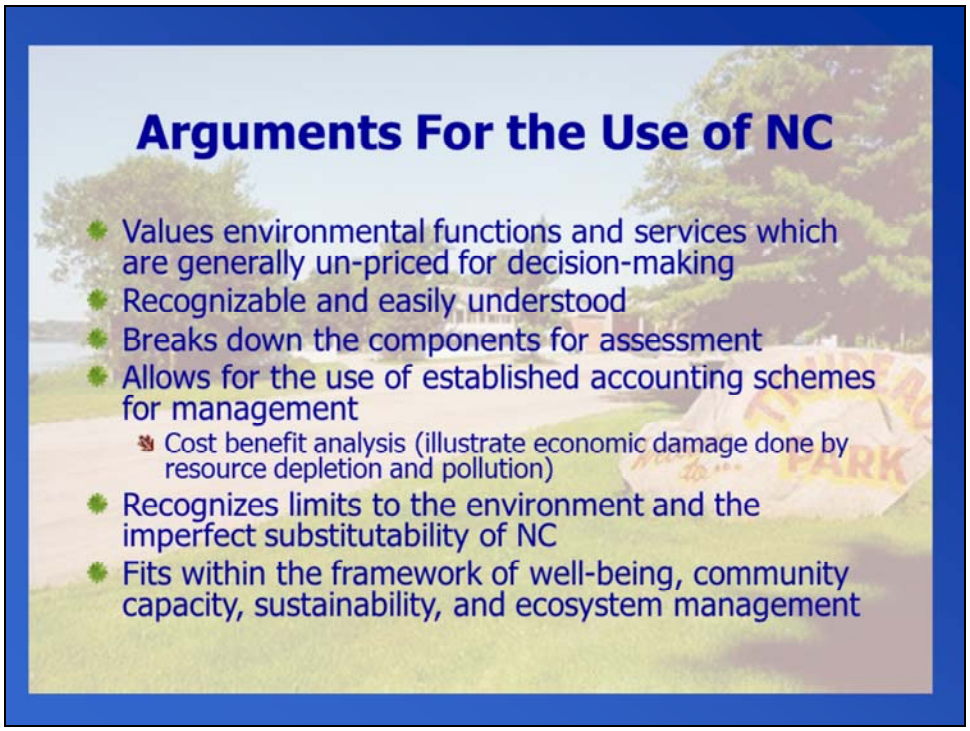


1st two elements of ecosystem services are also termed Critical NC in the literature because they are irreplacable and vital to the ability of our environment to support life.

Indicators of the state of the environment have been developed at various scales of inquiry from the global to the local. This slide presents a few examples of work that has been done. We are currently grappling with the problem of determining what indicators at these different scales are applicable at the local scale, for we are focusing on developing indicators for communities.

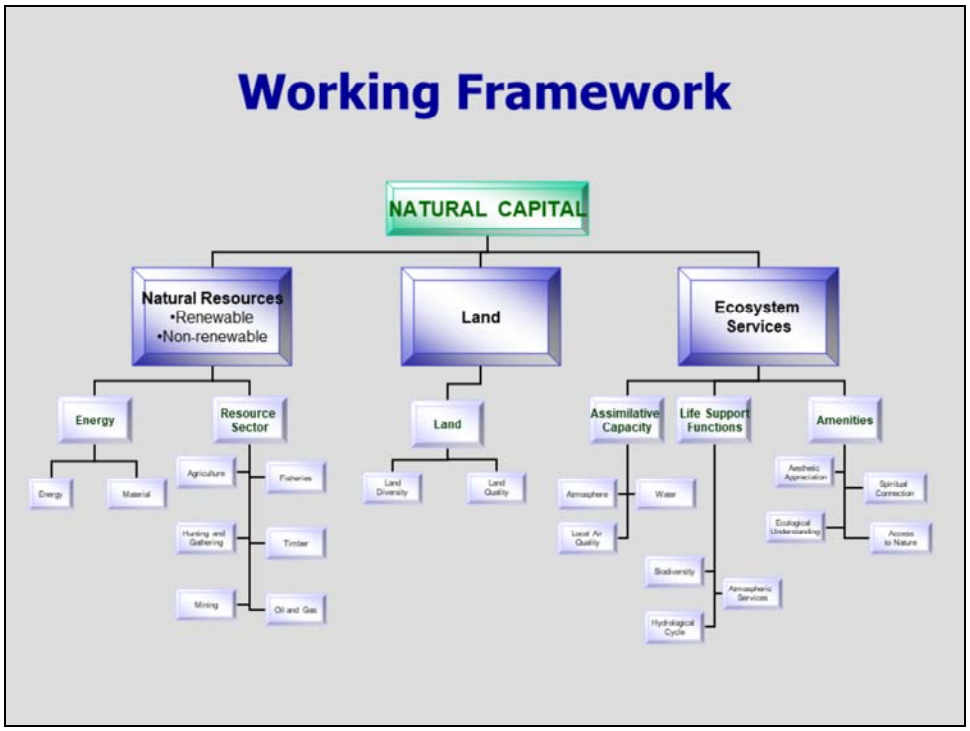


Before we go any further, there is a debate as to whether NC should be used as a term and concept at all. Here are some arguments against the use of NC.



If we recognize the fact that the environment cannot be accurately measured in terms of monetary worth, we can agree that the valuation of the environment is just an estimate, and invariably will be an underestimate of the environment's true value. The purpose of valuing the environment in monetary terms is to simply attach value to what was previously unpriced and most often unrecognized in decision making. If we take the view that values are not an accurate representation of the true, often priceless, value of the environment, then we can justify the use of NC as a starting point to work towards better valuing the env't (change). Now I will turn it over to Ingrid, thank you.

Point 6 : due to the existence of certain critical elements

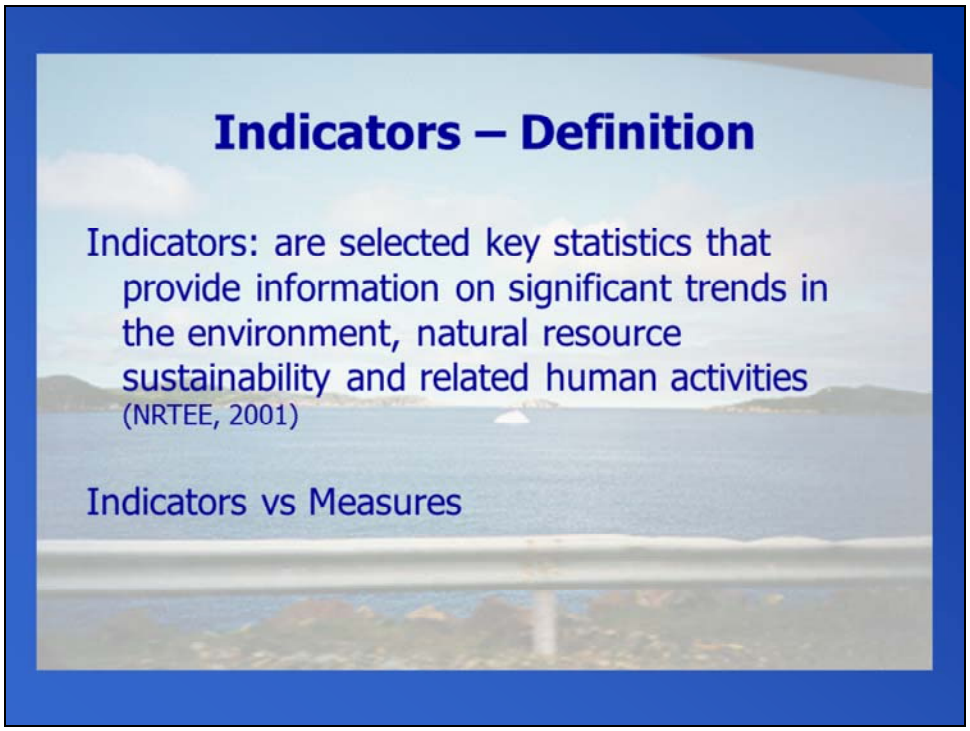


This is the framework that Sharmalene and I are currently developing –and will assist us in organizing our own thoughts, as well as to come up with the most appropriate type of indicator for different aspects of the environment. As you can see, this is only a portion of our full framework, which is located ****.

Our framework is divided into 3 components – Natural Resources, Land and Ecosystem Services. We have divided in this way based on how the literature has approached NC. This framework draws heavily from the Wellbeing of Nations by Robert Prescott-Allen.

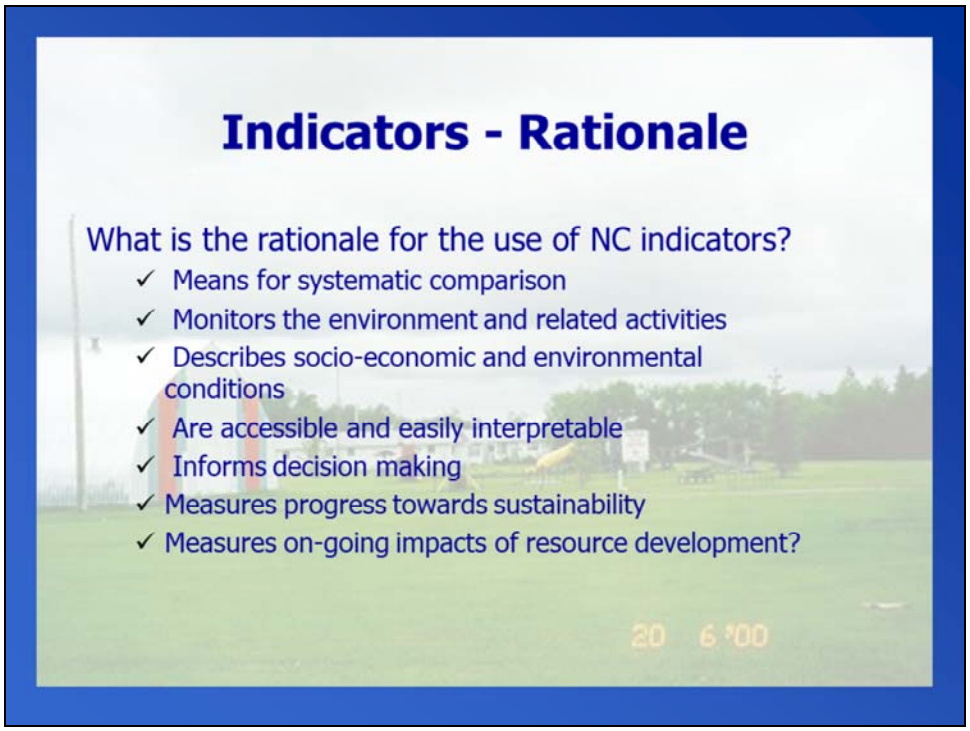
As you can see each component has it's own layer of elements and sub-elements. Our ultimate goal from doing this is to devise an indicator set that is meaningful and representative.

…..

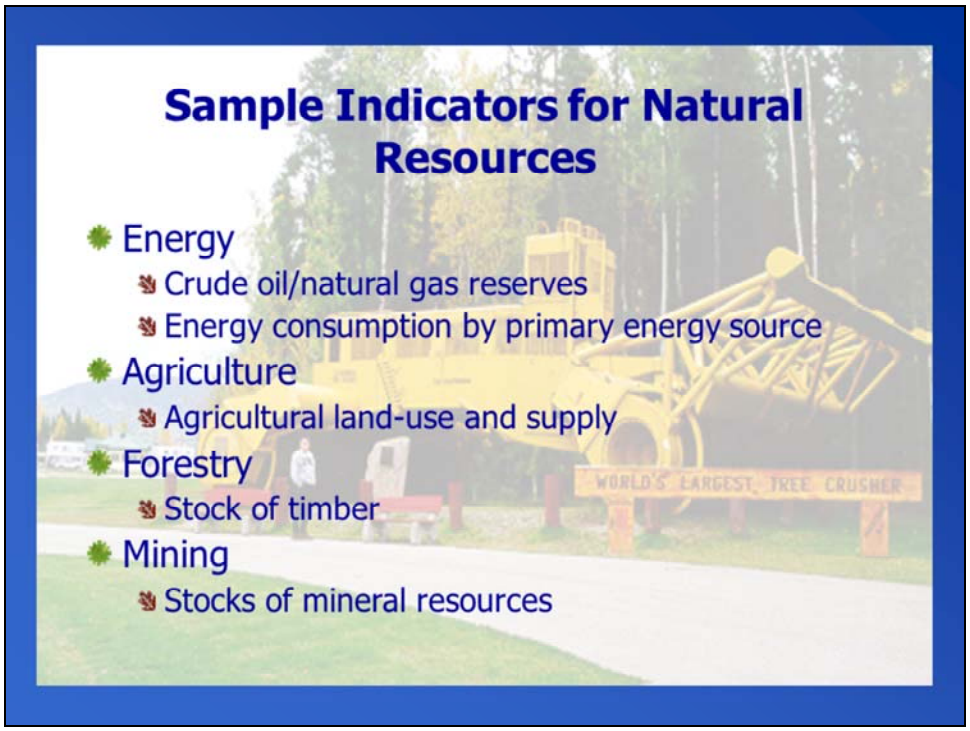


So what is an indicator…..

There is a distinction between indicators and measures – indicator – gives a sense/picture of the quality and quantity of something ,and a measure is the specific way of determining that quantity or quality. The literature often equates indicators are measures. (Parkins distinguishes between indicators and measures, and we are following his lead)

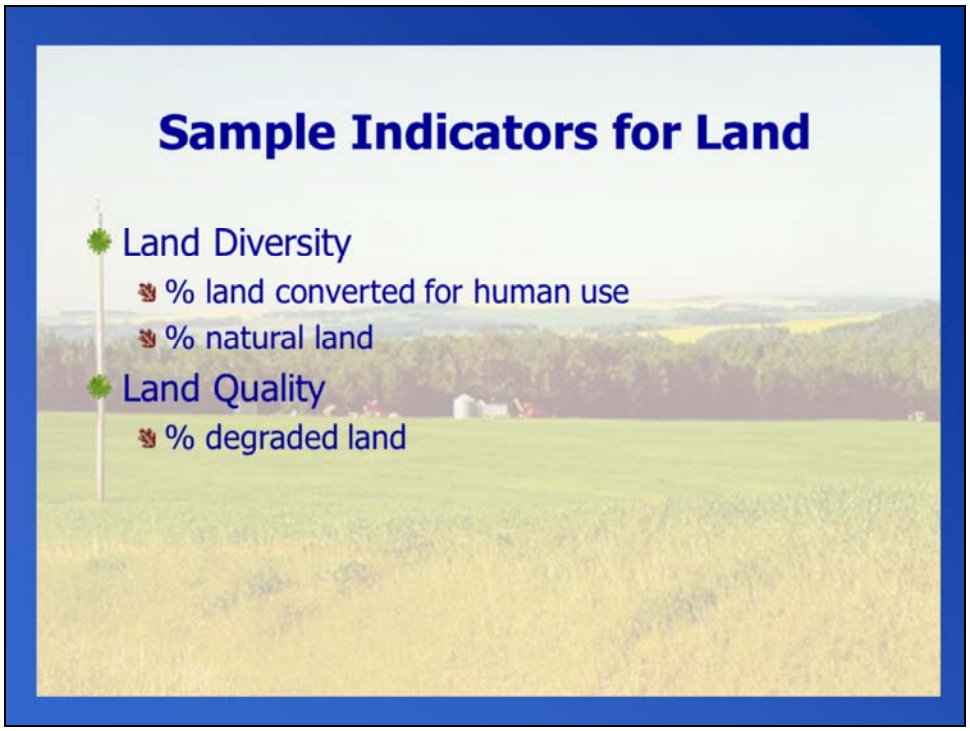


We want to develop indicators for the environment because…..



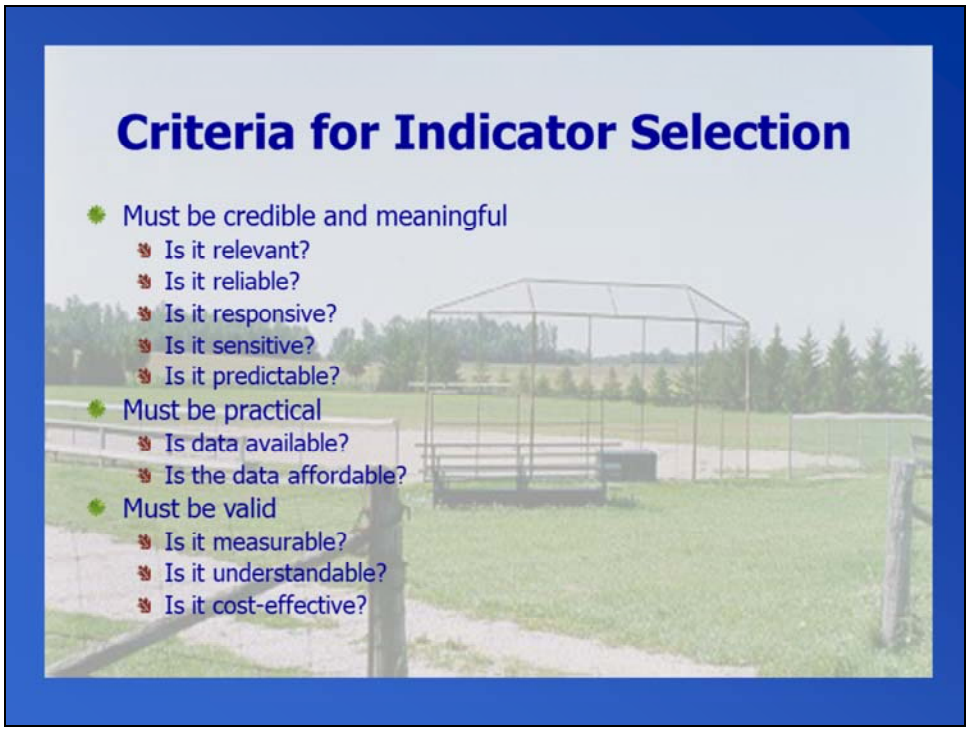
Based on the various sources of literature we have currently addressed, and the framework that we have in progress – the next 3 slides will provide example of indicators for each of the components of NC.

Example of indicators for energy are…



Indicators for land are

Mention ecological understanding – difficult to find indicators of all the components

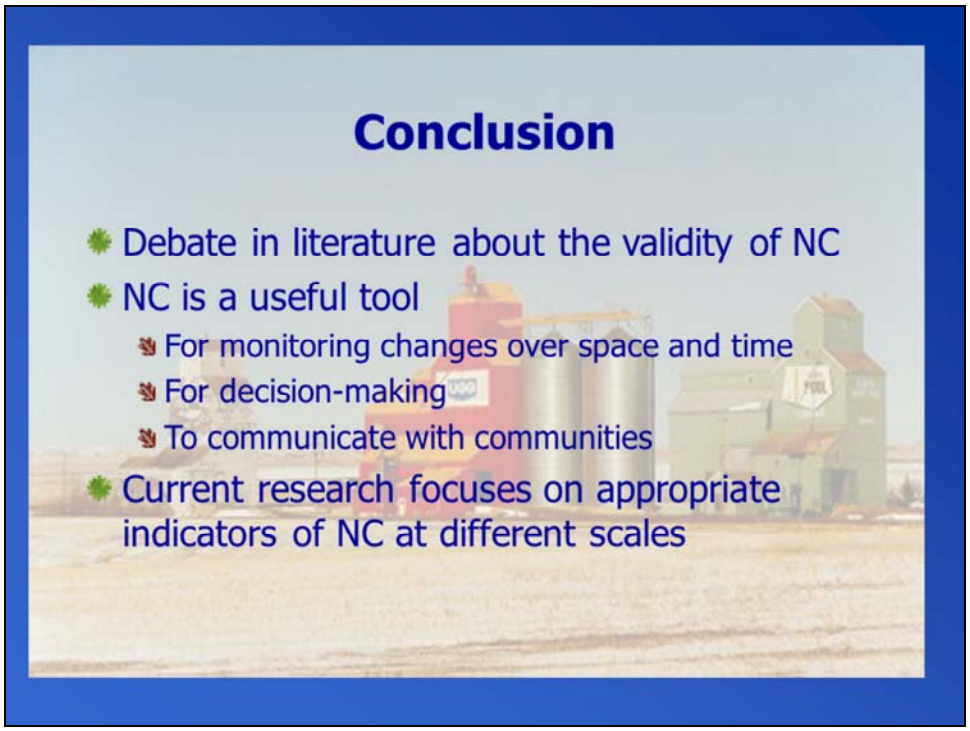


Once we have a full body of indictors, sharmalene and I will have to go through this list of criteria to determine whether the indicators chosen are appropriate.

….

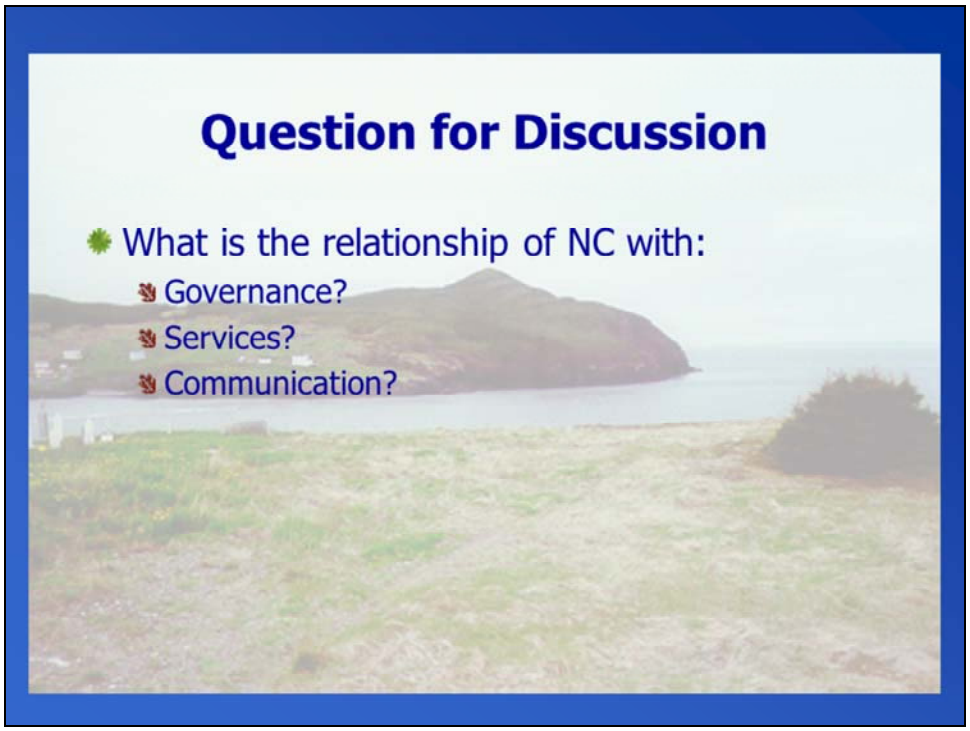
What We Plan to Do
Develop NC objectives
Finalize generic framework of NC
Finalize indicators to fit this generic framework
Create flexible framework to be used by communities as a tool to allow for local context and variance

Discuss…



In conclusion…

Thank you! Any questions?
TUMBLER RIDGE



Governance – regulations on industry, conservation practices, development (What are they? What standard/criteria do they meet? How are they enforced? How carefully are they followed?)

Services – What information is made available to locals (regarding quantity and quality of NC), and what organisation is responsible for providing this service?

Communication – need to communicate with communities to: explain indicators and how they may be of use; listen to indicators locals have in mind; come to a mutual understanding of what is locally-relevant