Chapter 3\_1 Notes (overhead)

Learning about ecosystems

Traditional Ecological Knowledge (TEK)

This is knowledge gathered by First Nations people about their HOME environments. One’s home environment is the AREA where you have lived for generations. This knowledge is based the beliefs, cultures, and values of the group. It has been gathered over thousands of years of experience.

A key part of TEK is that PEOPLE are treated as PART OF the ENVIROMENT, not something separate or ‘better than’ the environment.

-Other key beliefs within TEK are: everything is made by The Creator, all things have life (soul, feelings, value), everything is related (what you do to one thing impacts everything), everything must live in harmony and balance.

TEK can add to our understanding of the environment, and we can learn different ways to care for the environment with less impact on it.

Ecosystem Monitoring (**A**lso **K**nown **A**s *environmental* monitoring)

This is the process of checking on and monitoring the condition of an ecosystem over time to monitor changes in the condition of the ecosystem.

a) Physical monitoring

 -Changes in the LANDSCAPE over time

 -Use satellites, remote sensing, photographs, maps, surveys, traditional knowledge, etc.

b) Environmental monitoring

 -Changes in CLIMATE and WEATHER PATTERNS over time

 -Use weather stations, public records, satellites, traditional knowledge, etc.

c) Chemical monitoring

 -Changes in the quality of the air/soil/water over time

 -Use monitoring stations, instrumentation, water and air monitoring, etc.

d) Biological monitoring

 -Changes in ORGANISMS and POPULATIONS over time

 -Surveys, traditional knowledge, hunting data, population studies, etc.

Methods of Monitoring

BASELINE DATA is the beginning point, it is the information that you collect before you begin any changes in the ecosystem, it is your first record. All your future measurements are referenced back to this to define / see the changes in the ecosystem.

Permanent plots

A Permanent Plot is a study site kept over time in order to track changes. The area of land may be small, like a corner of a front lawn, or as large as a lake or a drainage basin for a river. The site is monitored year to year for many years. Sometimes measurements are taken once a year, or once a season, or even once a month.

Annual survey

It is a study done once a year, at the same time, done the same way, using the same instruments. These are used to track changes over time.

Environmental Impact Assessment

This is a formal report that describes the impact on an environment of any proposed developments/changes in the environment. An Environmental Impact Assessment is required before any new development can be done in an area, from a new neighbourhood to a mine (like Bengay Creek Coal).