

EXAMPLE - NORTH YUKON LAND USE PLAN¹⁻³

Plan partners and stakeholders identified six major planning issues of both short-term and long-term importance to the North Yukon Planning Region:

Oil and gas exploration and development in Eagle Plains

How might exploration and development of North Yukon's oil and gas resources affect the region? What are the cumulative effects and how will they affect the region's economy, society and environment, particularly the Porcupine Caribou Herd?

Land management and the Porcupine Caribou Herd

Residents of Old Crow are concerned about immediate and long-term conservation of the Porcupine Caribou Herd. The culture, traditional values and subsistence economy of the Vuntut Gwitchin depend on continued access to and utilization of a healthy Porcupine Caribou Herd.

Future development impacts on water, wetlands and riparian habitat

Wetlands, lakes, rivers and riparian environments are biologically productive areas that hold many of the heritage, cultural and ecological values of the region. Future land use activities have the potential to impact these values.

Opportunities to access land and resources

Future natural resource development will require access to resources, such as oil and gas, aggregate and minerals. Restrictions on access to these resources may affect the establishment and growth of the region's natural resource economy. Of particular concern are the Eagle Plains area and the land covered by the North Yukon Land Withdrawal.

Transportation

The current lack of ground transportation infrastructure in the region is seen as a barrier to natural resource development. All-season access roads may be required in the future to support economic development. However, roads and people's use of these features could affect wildlife and fish populations.

Climate change

Climate change affects land, water, wildlife, fish and people's use of these resources. The impacts of climate change may also compound potential future land use impacts.

1.4 Plan Principles

Four important principles underlie the North Yukon Land Use Plan.

Sustainable Development

The core principle that guides the Plan is sustainable development, as defined in the VGFNFA:

“Beneficial socio-economic change that does not undermine the ecological and social systems upon which communities and societies are dependent.”

Precautionary Principle

Regional planning should consider potential impacts before making resource decisions. Our limited understanding of land use impacts on other resources in the North makes this especially important. The International Institute for Sustainable Development describes the Precautionary Principle as:

“A lack of conclusive scientific evidence does not justify inaction on managing the environment, particularly when the consequences of inaction may be undesirable or when the costs of action are negligible.”

Conservation

The Plan proposes to manage fish and wildlife habitats using the conservation principle. Conservation, as defined by the VGFNFA is:

“The management of Fish and Wildlife populations and habitats and the regulation of users to ensure the quality, diversity and Long Term Optimum Productivity of Fish and Wildlife populations, with the primary goal of ensuring a sustainable harvest and its proper utilization.”

Adaptive Management

Adaptive Management means responding to changing land use and/or environmental conditions as new or better information becomes available. It is a management philosophy that applies a structured, iterative process to decision-making. Adaptive Management means we must:

“Look, learn and adjust as required.”



Figure 1.2. Sustainable development is the guiding principle for the Plan. The VGFN Final Agreement provides guidance for Plan principles and goals.



1.5 Plan Goals

The underlying principle of sustainable development is expressed in the Plan in a set of six goals that cover economic, social and ecological considerations.

Goal 1

Promote sustainable development by ensuring that social, cultural, economic and environmental policies are applied to the management, protection and use of land, water and resources in an integrated and coordinated manner.

Goal 2

Maintain terrestrial habitat in a condition required to sustain regional wildlife populations.

Goal 3

Maintain aquatic habitat in a condition required to sustain regional fish populations.

Goal 4

Maintain the integrity of wetlands, lakes, rivers and sensitive permafrost areas.

Goal 5

Recognize, conserve and promote the heritage and cultural resources and values of the Vuntut Gwitchin, other affected First Nations, and the Yukon.

Goal 6

Facilitate economic development opportunities and activities that result in socio-economic benefits to the community of Old Crow, other affected First Nations and Yukon as a whole, and that meet the sustainable development criteria established by this Plan.

3.3 General Management Direction

The third tool that the Plan uses to guide land use decisions is general management direction, which is provided in the form of strategies, best management practices and recommendations. The management direction proposed in the Plan can be integrated into existing processes such as YESAB project reviews and the land application review process.

General management direction applies to the Integrated Management Area (IMA).



3.3.1 Results-based Management Framework

Wherever possible, management direction for the Plan is structured around a results-based management framework.

A results-based management framework is a structured way to determine if Plan goals and objectives are being met. It is a way to link general, higher-level objectives with more detailed, operational decisions. The results-based management framework and its various components are summarized in Figure 3.2.

Goals and objectives state the desired management outcomes. Strategies are approaches and actions that land managers can use to achieve specific objectives. Strategies may include recommendations and best management practices. Best management practices are ways of working that can reduce the time, intensity or duration of land use activities¹. Many best management practices developed for Yukon relate directly to achieving objectives and strategies of this Plan. Appendix 3 contains references for applicable Yukon best management practices.

Monitoring and assessment of indicators is necessary to determine if goals and objectives are being met. Strategies can be adjusted in response to the changing status of indicators, facilitating an adaptive management process. The Plan proposes that the condition of land use or ecological indicators be tracked and reported for each LMU. At this time, indicators are not provided for all Plan themes and do not address all strategies or monitoring requirements. Currently, the Plan focuses on cumulative effects indicators. Additional indicators are suggested in Table 7.2, for future consideration.

¹ A description of best management practices is provided by the Yukon Department of Energy, Mines and Resources, Oil and Gas Management Branch, 2007:
http://www.emr.gov.yk.ca/oilandgas/best_management_practices.html#What_are_Best_Management_Practices.

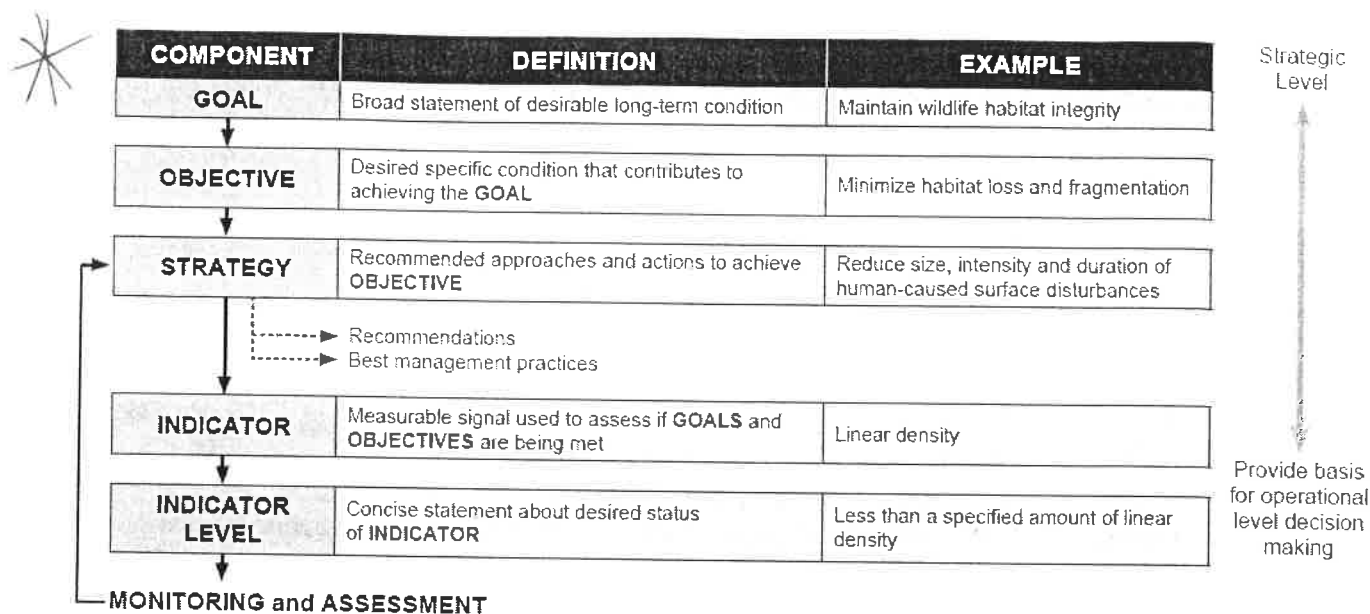


Figure 3.2. Components of the North Yukon Planning Region results-based management framework.

Cumulative Effects

Cumulative effects are changes to the environment and/or society that result from a land use activity in combination with other past, present and future activities. Managing cumulative effects is best accomplished by applying a suite of integrated and coordinated actions to land management. Assessment, mitigation, government policy, legislation and planning all play a role. In combination with these coordinated actions, the management of cumulative effects can be an important outcome of applying a results-based management framework to land management. An evaluation of cumulative effects is partially achieved through the measurement of indicators (i.e., how much impact are we having on the land?).

3.3.1.1 Cumulative Effects Indicators

The Plan proposes two indicators that can be used to track the potential cumulative effects of land use. These indicators provide resource managers with guidance to assist in their decision-making. When evaluated as a component of the results-based management framework, the indicators assist in establishing a general index of ecological integrity. Acceptable levels of change for the cumulative effects indicators are linked to the land use designation of each LMU or sub-unit in the Integrated Management Area (Zones I-IV). The indicators are:

- **Direct Surface Disturbance:** the amount of area physically disturbed by human activities. Such things as structures, roads, gravel quarries, seismic lines, access trails and similar features all create physical *footprints* on the land, resulting in direct habitat impacts.
- **Linear Density:** the total length of all human-created linear features (roads, seismic lines, access trails, etc.) in a given area. Linear density can be used as an indicator of fragmentation—the division of larger areas of habitat into smaller areas. Increasing levels