Forests, Lands and Natural Resource Operations

Land Based Investment Strategy: Planning and Delivery Framework

2014/15

The Land Based Investment Strategy (LBIS) Planning and Delivery Framework describes the annual LBIS planning and delivery cycle and outlines roles and responsibilities.

Contact:

Resource Practices Branch:
Allan Powelson, R.P.F.
P: 250-812-5054

BRITISH COLUMBIA | Ministry of Forests, Lands and Natural Resource Operations

Context

The Land Based Investment Strategy (LBIS) was created in 2010 through consolidation of the former Ministry of Forests, Mines and Lands/Ministry of Natural Resource Operation's mix of land-based programs in order to ensure that limited funding will be expended in the most efficient and effective way.

This framework reflects the recent evaluation of the LBIS and has been prepared to describe the annual LBIS planning and delivery cycle, and outline roles and responsibilities for staff involved with the strategy. This framework will be reviewed annually and updated as required.

Purpose

The purpose of the LBIS is to guide ongoing resource investments and short-term targeted investments in British Columbia's natural resources to realize environmental sustainability and economic prosperity.

The 2014/15 goals of the Land Based Investment Strategy are to:

- Strategically direct funding allotted to Land Base Investment to the highest priorities among a broad range of potential investment options across the natural resource sector.
- Actively manage natural resources to maintain and enhance their value.
- Mitigate impacts from catastrophic disturbances to the economic, social and environmental benefits of natural resources.
- Act on strategic priorities to enable the use of B.C.'s natural resources and contribute to the achievement of economic, social and environmental objectives of government.

Scope:

Eligible investment categories and priorities will be determined annually using the strategic direction from the following sources:

- The Ministry's service plan goals and objectives.
- Annual regional and provincial work plans that identify key priorities and projects.
- Other government commitments and specific initiatives.

Some of the existing activities and projects may have long-term strategies that identify priority work to be completed over a number of years.

As well, projects should meet the following government commitments:

- Eliminate the backlog NSR (pre 1987) by 2015.
- Continue remediating priority fish passage crossings, as per ministerial response to Forest Practices Board Special Investigation Report 25.
- Plant at least 20 million trees annually for the next 15 years on MPB and wildfire impacted lands
- Improving mid-term timber supplies through investments in incremental silviculture and tree improvement.
- Improve provincial forest inventories consistent with the 10 year inventory strategic plan.
- Prevent new, and reduce existing invasive plant impacts on forest and range resources acceptable to levels that are environmentally and economically acceptable.
- Protect the provinces international trade through the eradication of Gypsy Moth
- 2014/15-2016/17 Ministry Service Plan Performance Goals
- Data Quality Standard must align to meet Performance Measure 4 in the 2014/15 Ministry Service Plan
- Each investment category must consider how climate change has affected, or will affect, resource values and their associated goals, objectives and targets (appendix 4).

Investment Principles

- LBIS priorities are investments that have the greatest impact in meeting government objectives. This can be measured in terms of fiscal return on investment, opportunity cost, mitigation of impacts and other criteria that are reviewed annually.
- LBIS funding is for incremental discretionary investments in activities that provide economic, environmental and social benefits to British Columbians.
- LBIS funding will be directed only to eligible activities established for each eligible investment category.
- All investment proposals must be supported by at least a three year plan with clear targets and associated investment rationale.
- LBIS funding is not intended for activities that are part of the ministry's operational land management programs including those that do not have an 'on the ground' focus or for those that occur on private land.
- Investment categories are determined each year based on LBIS goals, objectives, and strategic priorities. Funds will be allocated between and within investment categories considering the potential contribution to the goals, objectives and strategic priorities of the LBIS, relative to cost.

- Land based investment activities will be delivered using the method deemed most effective and efficient to achieve the LBIS goals and objectives.
- All investment category planning teams will seek additional external funding, where possible, to assist in achieving the LBIS goals and objectives.
- The planning and allocation process will be open and transparent.

Annual Planning and Delivery Cycle

Roles and Responsibilities are outlined in Appendix 1.

The expectation is that each investment category will prepare and update each year an annual operating plan and a planning forecast at least 3 years into the future. The Annual Operating Plan should contain explicit descriptions of deliverables and targets that the deliverables are intended to achieve. The 3 – year forecast should at a minimum outline the targets that are to be achieved. These plans should also be tied to an overall strategic plan for either the program or business area.

An annual planning and delivery cycle has been prepared to explain the stages in the planning process and describe the key deliverables that will be produced as the LBIS is prepared each year.

LBIS Strategic Planning Input Process

Planning process for refining the goals and allocations for the LBIS for the next fiscal year ie 1 full year prior to the budget allocation and implementation of activities		
Timing	**Information**	**Output**
April 1- May 31 (High level direction)	• High level direction from government and Ministerial commitments (new and previous relevant commitments) ○ Specific direction from Executive ○ Service plan goals ○ Approximate budget from financial service branch and/or deputy[1]	• **LBIS goals and scope**
June 1-June 30 (RED and branch	• RPB provides summary of previous years accomplishments	• **LBIS Annual Report** (previous years

[1] Note when budget is released current year allocations will be sent out (usually April) and should not be confused with this process which is focussing on next year budget allocation – in addition ADMs will be updated on current year progress at least quarterly including discussions regarding current year budget reallocations, program delivery issues etc which again is a separate albeit parallel process

director/executive director input)	• REDs & Branch Directors/Executive directors consider: previous years accomplishments, higher level direction, Regional and Branch business needs • ADM RSD and directors/executive directors join a RED (or JALT) conference call for a general discussion of the **strategic direction and scope of investment categories** -"what is working well? What needs to be adjusted?" • REDs and Directors provide written input to RPB by July 1st with a focus on identification of **critical strategic issues and emerging issues relative** to the overall objectives of the LBIS.	accomplishments by June 15) • **Regional priorities** • **Synopsis of regional priorities based on RED consensus** • **Branch and Divisional priorities**
July 1-Sept 30 (Investment category leads build scenarios and targets for their program).	• RPB provide category leads with higher level input, RED and branch input and a target or range of potential funding levels based on government commitments, input received on key priority issues, previous performance, capacity and other relevant factors • Based on RPB input Category leads develop outcomes and targets considering scalability, operational feasibility, meaningful impact etc. Category leads also provide rational for decision E.g. benefits, risks, opportunity costs etc. • Based on all input (higher level, RED, branch, category leads). RPB develops 2 or 3 options.	• **Draft LBIS** • Category leads provide rational for decision Eg benefits, risks, opportunity costs etc
Oct 1- 0ct 31 (RED and branch review and input)	• RPB provides options, targets and Rationale to REDs and branches • ADM RSD and directors/executive directors join a RED (or JALT) conference call for a general discussion of the scenarios, options, issues and questions • REDs and branches provide written comments to RPB with particular	• **Revised Draft LBIS and budget allocation** for next fiscal

	emphasis on priority issues not adequately addressed and a description of the associated key implications (e.g. risks, opportunity costs, deferred benefits etc)	
Nov 1-Nov 30 (ADM input)	• RPB modifies options to reflect input and/or documents/summarizes outstanding RED, Branch, Category Team issues/concerns • ADM's discuss options and provide written feedback to ADM-RSD • RPB updates options including pros and cons of each option and recommends an option for ADM RSD approval	• **Revised Draft LBIS and budget allocation** for next fiscal
Dec 1- Dec 15 (Deputy input)	• ADM-RSD discusses options and recommended option with Deputy • Deputy consults with executive and/or staff as necessary • Deputy refines budget if required and provides direction and approval of options. • Deputy decision is communicated out to ADMs, REDs/EDs, and Investmnt category leads	• **Revised Draft LBIS and budget allocation** for next fiscal
Dec 15 to Feb 28th. (Building into business plans)	• Changes made to reflect Deputy direction • Deputy approves updated LBIS • LBIS targets built into business plans.	• **Revised Draft LBIS and budget allocation** for next fiscal • **LBIS targets reflected in business plans.**
March 1 to March 31 (Budget and business plan refinements)	• LBIS is updated to reflect actual (or assumed) budget if different than what was indicated in December	• **Final LBIS** produced • **Allocation letters** sent out

See diagram Appendix 2.

Annual Allocation of LBIS Funding

The annual allocation of LBIS funding, including the budget for activities in each of the eligible investment categories, will be determined each year using the following steps:

1) An investment rationale developed, periodically, for each eligible investment category based on LBIS goals, scope, investment principles, and priorities.

   The investment rationale will describe:

   - the issue(s) being addressed including the size and general area of impact within the province;
   - the proposed activities, outputs, targets and budget needs (required to fully address the issue);
   - how an investment would result in a significant contribution to achieving key government priorities;
   - if applicable, how an investment would address a FLNR statutory responsibility;
   - how much total funding would be required to resolve the issue;
   - how long it would take to resolve the issue at the proposed funding level;
   - the benefit(s) that could be achieved from an investment including: the types of benefits e.g., economic/job creation, social, environmental with quantifiable and qualitative information as available; and, how an investment would assist in the achievement of indicators or targets in other investment categories;
   - whether there could be a significant risk or lost opportunity (social/safety, economic, environmental) if the activity was not completed in the next fiscal year; and,
   - opportunities for partnering/leveraging funding.

2) The investment rationales will be evaluated by each of the investment category teams, using a criteria ranking tool (appendix 3), to assess how the proposed activities align with:

   - key government priorities and statutory responsibilities;
   - the benefits that can be derived from the activities (economic, environmental and social);
   - return on investment;
   - the opportunity for partnering/leveraging funding; and,
   - the risk or loss of opportunity of not implementing the proposed activity.

   The criteria ranking tool is based on the Priority Ranking tool used in FLNR's business planning process. Each evaluation criteria has a set of questions and associated points to help the reviewers assign a ranking score.

3) A draft recommended budget allocation will be presented to the ministry executive, for approval by the Deputy Minister.

4) The final annual budget for LBIS will be determined through the ministry's budget allocation process.

The criteria ranking tool is included in Appendix 3.

Adding new investment categories, activities, targets or outputs during the planning year

The Deputy Minister - Forests Lands, and Natural Resource Operations, in consultation with the Assistant Deputy Minister – Resource Stewardship, may add new investment categories, activities, targets, or outputs during a planning year that are directly linked to government's goals, objectives, or strategic priorities and the LBIS is adjusted accordingly.

Region and District planning and delivery of LBIS activities

A key phase of the planning process for the development of the Annual Operating Plan is to make decisions on how activities will be delivered.

Regions

Regions play a key role in the delivery of the LBIS. Allocations are made by the ADM Resource Stewardship Division to Area ADMs and are broken out by region, activity and goals. Regions then have the role of managing the movement of funds from the area level to districts while ensuring goals are accomplished within the allocated amounts. Key financial roles are:

- Working with districts to ensure adequate funding is distributed to ensure goal completion – in the South Area a Resource Working Group has been set up to ensure that the distribution of funds is equitable
- Coordinating activities with districts to ensure that sufficient staff are available to deliver activities and build the following years annual operating plan
- Working with the Area Finance Manager to identify surplus funds and move them in the designated surplus project on a timely basis
- Roll up goal accomplishments and financial reports from the region and districts quarterly

The regions operate as specialists and coordinators for the resource districts within the region. The typical role of regional specialists includes:

- Rolling up annual operating plans produced by the districts and communicating to Resource Practices Branch
- Providing planning, silviculture, forest health and other specialty area expertise and support to districts

- Direct delivery of LBIS activities – the defoliator program is a key example of direct delivery by regional specialists. In the Thompson Okanagan Region the FFT ITSL program and the relationship with BCTS has been established at the regional level.

Districts

The key role that districts have is the planning of activities or, the approval of plans that have been developed in consultation with the district. No activities will be funded unless this level of approval is in place. Districts should plan activities in collaboration with the regions to ensure that plans are consistent with the strategic objectives of the LBIS.

Districts should take on the direct delivery of LBIS activities only where they have the internal capacity to do so.

Overhead amounts sufficient to deliver the program are built into activity budgets with the assumption that there is sufficient qualified staff available to take on contract management and supervision of activities. Recent spending restrictions have restricted the ability to hire auxiliary employees with LBI funding which has limited districts to delivering with their existing staff or delivering with the assistance of implementation contractors. In situations where the district is not in a position to deliver activities due to staffing constraints the following options should be considered:

Options

- To ensure that sufficient qualified staff is available it is recommended that districts collaborate with local BCTS staff. This option, where feasible, enables the use of a full forestry team – LSO and STO employees working together to deliver activities. The Vanderhoof office is an excellent example of the collaborative model where activities and funding are divided between BCTS and the district based on the strengths that each has to offer
- Another option is to collaborate with other districts within or outside the region - the region could have a coordination role in this - to ensure that there are sufficient staff available to deliver activities. This option provides an excellent opportunity to provide silviculture experience to staff.
- Third party delivery of activities can be structured so that districts and or region staff have a clear and well defined role with the third party administrator (PwC) and the recipient agreement holder that would deliver the work. Recipient agreement holders could be local licensees, societies (the Nicola Similkameen IFPA society and Rocky Mountain Trench society are a recent examples), First Nations or consultants. The cost structure for delivering through third parties is as follows:
  - Administrative service agreement holder:
  - 3.5% administration

- 2% audit
- Recipient agreement holder:
- 12% administration on first $100,000
- 8% on amounts >$100,000
- Labour costs
- Equipment costs
- Contracted costs

It should be noted that the third party delivery model is an accurate reflection of the actual costs to deliver internally – if the actual costs of internal delivery were factored into the calculation. The use of third party delivery is a tool that can be ramped up quickly to address a short term issue without increasing staffing levels and can be collapsed very quickly without impact to Ministry staffing levels. The tool can be used to transition to internal delivery or to augment internal delivery.

Resource Practice Branch reserves the option of funding the most efficient and affective delivery model available in any region or district. To date the most effective delivery model for current reforestation has been to collaborate with BCTs to develop and sell FFT eligible ITSL's[2]. Under the ITSL model BCTS covers the cost of identifying, developing and marketing timber that is on the low end of the value stream that they would not normally be able to sell if they were to retain the silviculture obligations. In return the FFT program receives a planting prepared unit at no cost to the program. BCTS reforests the bock under a service agreement. The savings under this can be $1000/hectare or higher and enable the program to plant larger numbers of seedling s at the same budget level.

Overhead amounts

Overhead amounts sufficient to deliver activities by regions and districts are provided in the allocation. The overhead amount is determined by district and region staff during the development of the annual operating plan and is based on:

- Estimated costs to hire an auxiliary employee to deliver the goals – where ministry spending restrictions allow
- Estimated costs to hire an implementation contractor to deliver the goals
- Reasonable access costs to activity sites - determined in consultation with regional specialists
- Reasonable equipment costs- including helicopter costs - determined in consultation with regional specialists – to deliver activity goals
- Travel costs to achieve goals and attend LBIS meetings

[2] ITSL MOU between Resource Practices Branch and BCTS
http://www.for.gov.bc.ca/hcp/fia/landbase/fft/20120709111855.pdf

There is flexibility built into the overhead amount in recognition that areas and regions are managing an aggregate amount. Using overhead amounts to manage local pressures must be done in consideration of the goals that are attached to the allocated amounts.

LBI overhead amounts **should not** be used to:

- Hire full time staff
- Fund non – LBI program expenses. Examples include helicopter usage for non LBI purposes, office expenses – including I Pads, monitors, cameras and other miscellaneous items and, vehicle costs over and above what can be reasonable charged against the LBI activities.
- Fund staff travel and training not directly related to the planning and delivery of LBI activities
- Fund off site meetings that are not directly related to the planning and delivery of the LBIS
- Fund reclassification of staff tasked with planning and delivering the LBIS

Flexibility of implementation

All unused (surplus) funds for each LBIS funding activity must be reported to the Resources Practices Branch (RPB) with each quarterly report. Operational variance of 10% of outputs and funding is allowed between targeted activities within an investment category as long as aggregate funding levels are not exceeded.

At the area level, once goals have been met funds can be transferred within programs (i.e. between Investment Categories within a program) to assist in the achievement of stated goals that may not be met without further funding. Programs and related Investment Categories are defined as follows;

Program	Investment Category
FFT	Current reforestation
	Forest health
Range	Invasive Plants
	Ecosystem restoration
	Range specific

Wildlife	Wildlife

EBM	EBM

Funds may only be moved between investment categories (e.g. current reforestation and inventory) or programs through a reallocation process facilitated by RPB.

Reallocation process

Once an Area has met its goals within the flexibility of LBIS fund movement, Area financial managers and staff – in collaboration with CSNR financial staff assigned to Resource Practices Branch - will coordinate the amalgamation of unused amounts to the unallocated provincial project. The timely movement of unused funds will enable the addressing of emerging priorities regardless of investment category or location within the province. The final decision on reallocating unused/unallocated funds resides with the ADM Resource Stewardship.

Reporting, Auditing and Evaluation of LBIS Achievements

An annual report will be produced to report on performance indicators and program accomplishments towards the achievement of LBIS goals.

Additional periodic reports e.g., quarterly reports, may be produced as required and/or directed in a format as specified.

Auditing/quality assurance will be carried out to ensure that funded activities are consistent with government standards as appropriate.

LBIS Communications and Engagement

A communications plan will be developed, reviewed and updated annually to determine what, how, and when to communicate to the public about LBIS.

As part of the communications plan, a website that includes current and relevant LBIS information will be maintained.

An engagement strategy will be developed to focus initially on how the LBIS is being refined. Stakeholders, communities and First Nations will be considered in developing the engagement strategy.

Appendix 1: Roles and Responsibilities

Deputy Minister

Responsible for:

- Approval of the Land Based Investment Strategy.

Assistant Deputy Minister -Resource Stewardship Division

Responsible for:

- Approval of the transfer of funds between eligible investment categories.

Resource Stewardship Division, Resource Practices Branch (RPB)

Responsible for:

- Develop, and update as required, a planning and delivery framework to facilitate: the determination of LBIS scope, goals, investment principles, eligible investment categories, and the investment allocation; reporting, auditing and evaluation of LBIS achievements; communication and engagement as required through the annual planning and delivery cycle.
- Supporting the annual planning and delivery cycle by:
    - Gathering and analyzing information to determine provincial priorities, and eligible investment categories;
    - Coordinating the development of investment rationales and outputs and targets for each eligible investment category;
    - Coordinating the annual funding allocation process;
    - Preparing LBIS updates to the rolling 3 year strategy;
    - Providing technical expertise and staff resources as required by the Corporate Initiatives Division;
    - Distributing communications materials and reports e.g., via internet or as determined in the LBIS framework;
    - Supporting engagement activities as required;
    - Overall coordination of investment category teams through the annual planning and delivery cycle e.g., managing the overall LBIS budget; managing activity standards; gathering and compiling input from category teams for the annual budget allocation process; gathering and compiling accomplishments for quarterly and annual reports; auditing and quality assurance on activities as required; annual program evaluation for continuous improvement.

Investment Category Leads

Responsible for:

- Supporting the annual planning and delivery cycle by:
    - Coordinating input from the specific category teams to develop and/or update, and evaluate (using the criteria ranking tool) investment rationales for the annual funding allocation process;
    - Participating in the determination of, and reporting on, outputs and targets specific to investment categories, required to achieve LBIS priorities, goals, and objectives;
    - Managing activity standards in collaboration with RPB;
    - Providing oversight for the delivery of category specific activities included in the LBIS e.g., coordinating First Nations information sharing;
    - Supporting communication and engagement activities as required; and,
    - Auditing/quality assurance to ensure that activities are consistent with government standards.

FLNR Regional and District Staff

Responsible for:

- Supporting the annual planning and delivery cycle by:
    - Identifying strategic gaps and opportunities in the LBIS planning process;
    - Collaborating with investment category leads and RPB e.g., to recommend tactics needed to achieve LBIS goals, objectives, indicators and targets; and to identify priority treatment areas;
    - Balancing activity proposals to optimize achievement of regional/district indicators and targets in alignment with LBIS goals and priorities;
    - Collaborating with RPB in the development of (delivery allowance) cost caps;
    - Achieving LBIS outputs/targets within their respective region/district where they are directly responsible for delivery;
    - Communicating provincial, regional/district indicators, targets and tactics for LBIS and where applicable, supporting additional communication and engagement activities as required;
    - Where applicable, managing regionally held recipient agreements;

- Where applicable, reviewing information sharing with First Nations undertaken by third parties (delivery agents) to ensure it is adequate for the LBIS project to proceed;
- Providing information about the achievement of LBIS outputs for preparation of annual (and other) reports and where applicable, ensuring timely entry of accomplishments into databases, e.g., RESULTS;
- Auditing/quality assurance to ensure that activities undertaken are consistent with government standards.

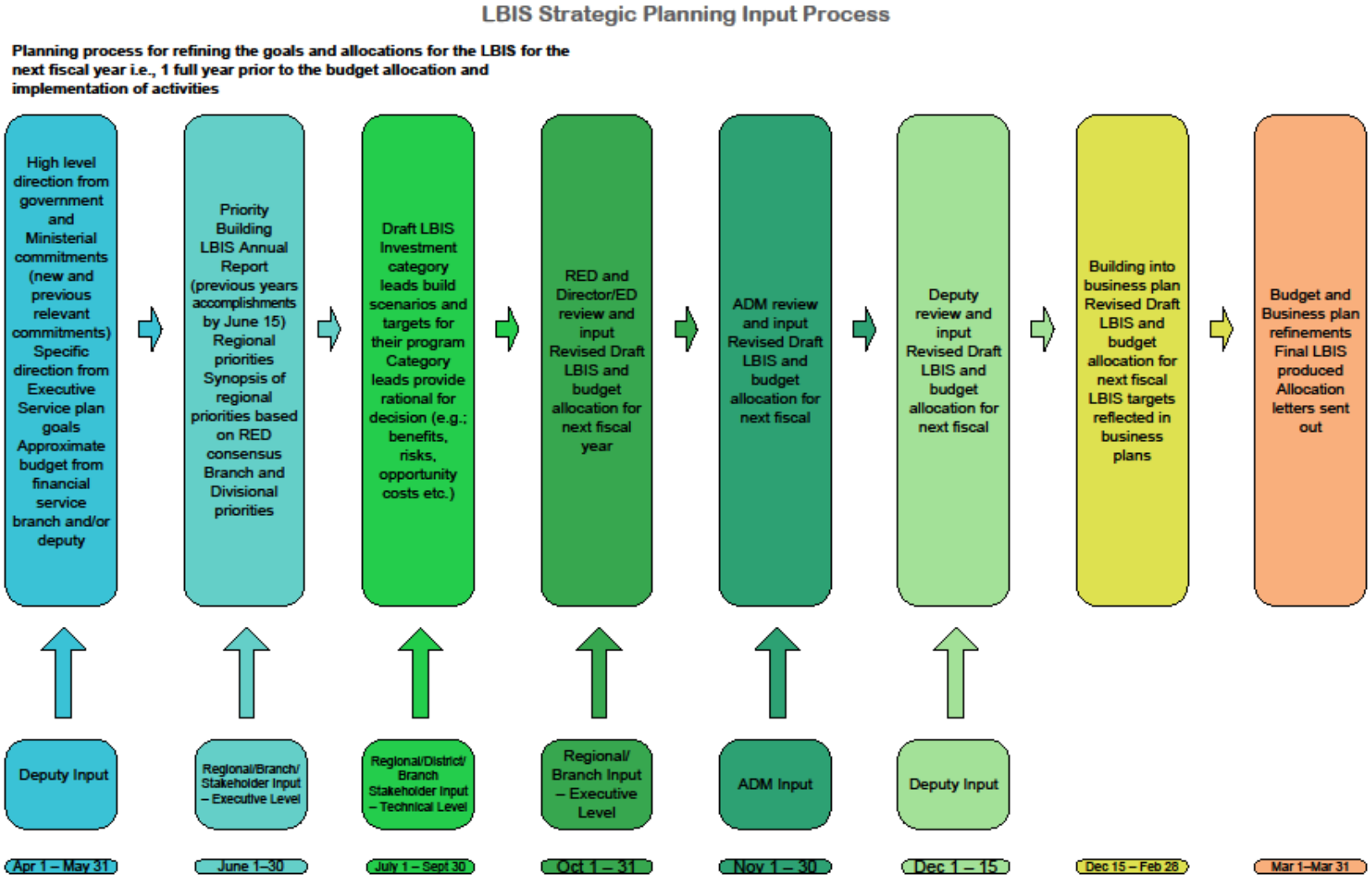
- Monitoring program implementation collaboratively with RPB and other staff. Reviews may be done on recipient agreement holders, contractors, districts, BCTS and industry work.

Provincial Stewardship Leadership Team

Responsible for:

- Supporting the annual planning and delivery cycle by:
  - Identifying strategic gaps and opportunities in the LBIS planning process;
  - Providing input to the LBIS budget determination process;
  - Providing input to the program evaluation process.

Appendix 2: LBIS Annual Planning and Delivery Cycle



Appendix 3: LBIS Criteria Ranking Tool

LBIS Ranking Criteria		Description	Points
Key Government Priority	Is the activity a high profile priority of Cabinet or the Minister or a key objective of the ministry service plan?	MFLNRO and/or Government priority (e.g. supported by Minister or Cabinet announcement)	15
		MFLNRO priority (Deputy Minister/ADM direction) or has been identified as a regional priority	10
		Not a MFLNRO priority, however it has been identified as a regional or district or provincial priority by the investment category	3
		None of the above	0
Statutory Responsibility	Does the activity address a MFLNRO statutory responsibility? (does not include legal reforestation obligations)	Directly required to make statutory decisions or adhere to statutory requirements	10
		Indirectly required to make statutory decisions or adhere to statutory requirements	7
		Not required to make statutory decisions or adhere to statutory requirements	0
Scope of Benefit	Magnitude of the expected impact in addressing MFLNRO goals, objectives and strategic priorities	Provides provincially significant benefits in at least one category – social/safety, economic, environmental	15
		Provides regionally significant benefits in at least one category – social/safety, economic, environmental	10
		Provides locally significant benefits in at least one category – social/safety, economic, environmental	5
		No significant benefits	0
Multiple Benefits	What is the potential for the activity to provide positive benefits in more than one category (social/safety, economic, environmental)	Provides high or moderately significant benefits in all three categories (social/safety, economic, environmental)	10
		Provides high or moderately significant benefits in two categories (social/safety, economic, environmental)	5
Reliability of Benefits	Strength of evidence that the activity will result in the projected outcomes	High likelihood that outcomes will be realized	6
		Moderate likelihood that outcomes will be realized	4
		Low likelihood that outcomes will be realized	2
		No likelihood that outcomes will be realized	0
Risk/Opportunity/Urgency	If the activity is not completed this fiscal year, does it pose a significant risk or lost opportunity (social/safety, economic, environmental)?	Poses significant risk or loss of opportunity	9
		Poses moderate risk or loss of opportunity	6
		Poses low risk or loss of opportunity	3
		No risk or loss of opportunity	0
Job Creation	To what extent will the allocation of resources to this activity create employment opportunities?	Provincial significant long and short term employment	7
		Regionally significant long and short term employment	4
		Locally significant long and short term employment, or addresses government's objectives for Aboriginal job creation	2
		No or minimal long and short term employment	0
Return on Investment	To what extent will the allocation of resources to this activity create greater return on investment or benefit cost ratio?	Provincially significant social, safety, economic or environmental return on investment	9
		Regionally significant social, safety, economic or environmental return on investment	6
		Locally significant social, safety, economic or environmental return on investment	5
		No return on investment or minimal benefit	0
Partnering/Leveraging	To what extent will the allocation of resources to this activity attract the	Provincially significant partnership/leveraging	6
		Regionally significant partnership/leveraging	4

	resources of other parties or organizations	Locally significant partnership/leveraging	2
		No likelihood of partnership/leveraging	0

Appendix 4 : Investment category Planning Contacts

Investment Category	Planning Process	Contact
LBIS	Deputy Minister – direction, scope, budget	Allan Powelson
Ecosystem Based Management	EBM planning group – Ministry, NGO's, FN, Industry	Sari Saunders
Ecosystem Restoration	Resource District facilitated multi-sector steering committees	Al Neal
Fire Management	Area Based WMB fire management specialists	Kelly Osbourne
Fish	Fish Passage working group – Ministry, Federal, MoE	Ian Miller
Forest for Tomorrow (current reforestation and timber supply mitigation)	FFT planning team – District/Region/Provincial stewardship staff (licensees and BCTS included)	Allan Powelson/Monty Locke
Forest Health	FH planning team - regional and provincial specialists	Tim Ebata
Invasive Plants (species)	Invasive Species Working Group - multi-sector steering committees	Val Miller
Inventory (VRI/Site productivity)	Provincial planning team – area based inventory specialists	Gary Johansen/Ron Plamanden
Range	Provincial planning team – Districts	Perry Grilz
Recreation	Provincial planning team – Districts	John Crooks
Visuals	Provincial planning team – area based specialists	Jacques Marc
Water	Transitioning from MoE to FLNRO	Dave Maloney
Fish and Wildlife Inventory	Provincial fish and wildlife teams – regional specialists	Ian Hatter – wildlife Sue Pollard – Fish
Habitat (UWR/WHA)		Andy Witt
Species at Risk		Chris Ritchie

Appendix 5 : Planning for a changing climate

Managing natural resources under inherent uncertainty of a changing climate will be challenging. Resilience of ecosystems is critical to maintain terrestrial and aquatic resource values, and research along with management experience has shown that building resilience into natural systems is an effective way to manage in an uncertain environment. In some cases, remediation needs to occur before an ecosystem can become resilient. As well, adaptation to a changing climate also means that our practices and management need to change because the land or water no longer can produce what it once did in some instances.

The LBIS views climate change as a lens that is placed upon all our resource decisions. For the LBIS to address the considerable resource challenges each investment category faces it is important to address all values as a whole to determine issues and management options that are synergistic and cost effective. All investment categories deal with processes that consider how climate change has affected resource values and their associated goals, objectives and targets. Each investment category examines societal goals and objectives for our natural resources in light of climate change and identifies opportunities to coordinate and integrate existing program areas and management actions, including investments, towards ecosystem renewal. LBIS activities relative to climate change are not about recreating the past, instead it puts the current situation into context and through the lens of climate change and management options creates a pathway for addressing the stressors that have occurred due to the change/disturbance.