

Comparison of Common Features of Terrain, Bioterrain and Terrain Stability Mapping

	Terrain Inventory Mapping	Bioterrain Mapping	Terrain Stability Mapping (TSM)
<i>Info Displayed</i>	<ul style="list-style-type: none"> • Terrain (other interpretations optional). 	<ul style="list-style-type: none"> • Terrain and drainage (other terrain interpretations optional), ecosystem attributes. 	<ul style="list-style-type: none"> • Terrain, drainage, slope, stability (other interpretations optional).
<i>Mapping Extent</i>	<ul style="list-style-type: none"> • Entire landscape is usually mapped. 	<ul style="list-style-type: none"> • Entire landscape is usually mapped including the alpine and sub-alpine. • Many projects only map Crown Land. 	<ul style="list-style-type: none"> • Detailed TSM maps the entire landscape excluding inoperable areas and alpine. • Reconnaissance TSM usually maps unstable and potentially unstable polygons only; stable terrain is not usually subdivided.
<i>Delimiters vs. Deciles</i>	<ul style="list-style-type: none"> • Either delimiters or deciles can be used. • Historically delimiters are used. • Minimizing the use of complex polygon labels and delineating pure polygons make the mapping more useful for multiple purposes and thus, more cost effective over the long term. 	<ul style="list-style-type: none"> • Deciles used to indicate proportions of terrain components in complex polygons. • Use of deciles can add to the complexity of the terrain symbols. • Deciles can be used to generate a dot density theme which spatially represents the components of the terrain symbol. • Deciles can give a false sense of accuracy. 	<ul style="list-style-type: none"> • Delimiters used to indicate relative proportions of terrain components in complex polygons. • Delimiters can be hard to deal with for modeling and querying of the database.
<i>Polygon Delineation</i>	<ul style="list-style-type: none"> • Polygon delineation by terrain mapper only. 	<ul style="list-style-type: none"> • Polygon delineation by terrain mapper and modified by ecological boundaries. • Terrain information is tied to vegetation and climate information. • Creative interpretations can draw on this interdisciplinary approach to describing the landscape. 	<ul style="list-style-type: none"> • Polygon delineation by terrain mapper only. Polygon boundaries are not modified by other disciplines.
<i>Aspect</i>	<ul style="list-style-type: none"> • Aspect not used as a criterion for splitting polygons. 	<ul style="list-style-type: none"> • Aspect used as a criterion for ecological splitting of terrain polygons. 	<ul style="list-style-type: none"> • Aspect splits only present if they represent a significant difference in stability.
<i>Slope</i>	Slope steepness not required and not	• Slope steepness not required and not	• Slope classes or ranges interpreted for

<i>Steepness</i>	commonly mapped.	commonly mapped.	each polygon.
<i>Slope Breaks</i>	<ul style="list-style-type: none"> Only slope breaks that are tied to the definitions of surface expression terms in the Terrain Classification System for BC are used unless otherwise specified. 	<ul style="list-style-type: none"> Slope breaks linked to ecological criteria (Interior: 25%, Coast: 35%, cliff: 100%) 	<ul style="list-style-type: none"> Slope breaks dependent on stability evidence in the landscape. Criteria vary with region.
<i>Data Access</i>	<ul style="list-style-type: none"> Some data is available on-line through the Digital Terrain & Soils Map Library (the MapPlace) Approximately 70% of BC mapped at 1:50,000 scale. Should be used more today but a general lack of knowledge of this type of mapping has lead to a decrease in its use. See Access to Terrain and Soils Information page or contact the terrain custodian at soilterrain@victoria1.gov.bc.ca. 	<ul style="list-style-type: none"> Data is available on EcoCat, interim FTP sites, and will be available in the Land Resource Data Warehouse (LRDW) in the future. 	<ul style="list-style-type: none"> Some data is available on-line (MapPlace.ca, Southern Interior Forest Region, Cariboo Forest Region and other BC Regions) and some from the Ministry of Forests' regional geomorphologists. See Access to Terrain and Soils Information page for links to the above sites or contact the terrain custodian at soilterrain@victoria1.gov.bc.ca. Data will be available from Ecocat, ftp sites or the LRDW in the future.
<i>Mapper Qualifications</i>	<ul style="list-style-type: none"> For Forest Renewal BC and Forest Investment Account-funded projects mapper qualifications have been enforced. 	<ul style="list-style-type: none"> Mapper qualifications where not well defined and have not been strictly enforced in the past. 	<ul style="list-style-type: none"> For Forest Renewal BC and Forest Investment Account-funded projects mapper qualifications have been enforced.
<i>Map Product</i>	<ul style="list-style-type: none"> Currently, final hard copy maps are thoroughly edited, signed and sealed by the Qualified Registered Professional terrain mapper. 	<ul style="list-style-type: none"> Stand alone bioterrain maps are not usually required for ecosystem mapping. 	<ul style="list-style-type: none"> Final hard copy maps are thoroughly edited, signed and sealed by the Qualified Registered Professional terrain mapper.
<i>Mapping Methodology-Hierarchy of Attributes</i>	<ul style="list-style-type: none"> Mapping methodology outlines a hierarchy of attributes. 	<ul style="list-style-type: none"> No clear hierarchy of attributes defined. There is currently no standard for reconciling competing ecological and terrain criteria. 	<ul style="list-style-type: none"> Mapping methodology outlines a hierarchy of attributes.
<i>Map Purpose</i>	<ul style="list-style-type: none"> Multi-purpose map. Mapping can be used as a base to derive other interpretive and specific purpose maps. Mapping should be evaluated and 	<ul style="list-style-type: none"> Single purpose map. Difficult to derive other standard interpretations after the fact. 	<ul style="list-style-type: none"> Single purpose map. Difficult to derive other interpretations and specific-use maps after the fact with the exception of interpretations commonly associated with slope

	modified by a qualified professional. Revised mapping to be submitted to the terrain custodian as a new project.		stability such as potential for landslide debris to enter streams, surface erosion potential, and risk of sediment delivery to streams (fieldwork and mapping upgrade are necessary).
<i>Mapping Detail</i>	<ul style="list-style-type: none"> • Detail across the landscape reflects the complexity of the surficial materials and processes. 	<ul style="list-style-type: none"> • Drainage differences across the landscape are mapped in detail. • The mapping of wetlands and riparian areas is more reliable than the other two types of mapping. 	<ul style="list-style-type: none"> • Detail tends to be in the steeper ground with 'lumping' of drainage and slopes in the gentler terrain.
<i>On-site Symbols</i>	<ul style="list-style-type: none"> • The use of on-site symbols may vary from project to project. • Inventory mapping tended to collect glacial features and relevant stability features. 	<ul style="list-style-type: none"> • On-site symbols inconsistently used. Symbols mapped on the air photos are not always collected digitally. 	<ul style="list-style-type: none"> • On-site symbols related to terrain stability are used fairly consistently. • Other symbols used as needed (e.g., glacial features).