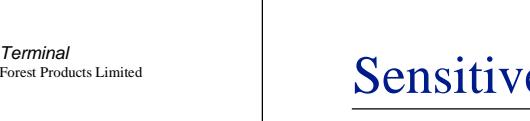


Sensitive and Terrestrial Ecosystems Labels



Sensitive Ecosystems Inventory of the Sunshine Coast and Adjacent Islands



Sensitive Ecosystems

Sensitive ecosystems are fragile and/or rare, or are ecologically important because of the diversity of species they support.

Old Forest (OF):

Conifer-dominated by moist forest types, structural stage 7 (see table), generally >250yrs.

Subclasses:

co (conifer dominated) - greater than 75% coniferous species

Woodland (WD):

Open forests, generally between 10 and 30% tree cover, can be conifer dominated or mixed conifer and arbutus stands; because of open canopy, will include non-forested openings, often with shrubs and brush outcroppings.

Subclasses:

co (conifer dominated) - greater than 75% coniferous species

mx (mixed conifer and deciduous) - a minimum of 25% cover of either group is included in the total tree cover

Herbaceous (HB):

Non-forested ecosystems (less than 10% tree cover), generally with shallow soils and often with bedrock outcroppings; includes large openings within forested areas, coastal heads, steep slopes, talus slopes and herbaceous hills, sometimes low shrubs, moss and lichen communities.

Subclasses:

hb (herbaceous) - general concept of the category, non-forested, less than 10% tree cover, generally shallow soils, often with exposed bedrock, predominantly a mix of grasses and forbs, also lichens and mosses

ca (coastal vegetation) - all as but influenced by proximity to ocean, wind-swept shoreline and slopes, coastal vegetation, grasses and herbs, some rock outcrops, moss and lichen communities

vs (vegetated shoreline) - low-lying rocky shoreline, soil pockets in rock cracks and crevices, salt-tolerant vegetation, generally with 20% vegetation cover

sp (spur) - finger-like extension of beach, comprised of sand or gravel deposited by longshore drift; low to moderate cover of salt-tolerant grasses and herbs

ds (dune) - ridge or hill, or beach area created by windblown sand; may be more or less vegetated depending on depositional activity; beach dunes will have low cover of salt-tolerant grasses and herbs

sh (shrub component) - > 20 % of total vegetation cover is shrub cover, with grasses and herbs

Riparian (RI):

Areas adjacent to water bodies (rivers, lakes, ocean, wetlands) which are influenced by factors such as erosion, sedimentation, flooding and/or submergence due to proximity to the water body; structural stages 1 - 7.

Subclasses:

lf (low bank floodplain) - flooded at least every other year for moderate periods of growing season; plants species adapted to extended flooding and abrasion, low or tall shrubs most common

fm (medium bank floodplain) - flooded every 1-4 years for short periods (10-25 days); deciduous or mixed forest dominated by species tolerant of flooding and periodic sedimentation, trees most common

hf (high bank floodplain) - only periodically and briefly inundated by high waters, but lengthy subsurface flow in the rooting zone; typically conifer-dominated floodplains of larger coastal rivers

fr (fringe) - narrow linear alongsides along open water bodies (rivers, lakes and ponds) where there is no floodplain, irregular flooding

ga (gully riparian) - watercourse is in a steep sided V-shaped gully

rw (riparian) - watercourse is large enough to represent >10% of the polygon

Wetland (WN):

Areas that are saturated or inundated with water for long enough periods of time to develop vegetation and biological activity adapted to wet environments. This may result from flooding, flooding and sedimentation, or groundwater saturation.

Subclasses:

bg (bog) - nutrient poor wetland, on organic soils (sphagnum peat), water source predominantly from precipitation, may be treated as dry land

fr (flooded) - vertical linear peat pond where ground water inflow is the dominant water source, open water channels common; dominated by sedges, grasses and mosses

ms (marsh) - wetland with fluctuating water table, often with shallow water, usually dominated by sedges, grasses, and aquatic plants and sedges

sw (swamp) - very rich wetland on mineral soils or with an organic layer over mineral soil, with gently flowing or seasonally flooding water table; woody vegetation

sw (shallow water) - standing or flowing water less than 2 m deep, transition between deep water and emergent vegetation, may be seasonal (i.e. bogs, swamps, fens, etc.), often with vegetation rooted below the water surface

wm (wet meadow) - periodically saturated but not inundated with water, organically enriched mineral soils; grasses, sedges, rushes, forbs dominate

Cliffs (CL):

Very steep slope, often exposed bedrock, may include steep sided sand bluffs; habitat for rare species

Subclasses:

cc (coastal cliffs)

ir (interior cliffs)

Other Important Ecosystems

Other important ecosystems have high biodiversity values.

Mature Forests (MF):

Usually conifer-dominated, occasionally deciduous, dry to moist forest types, structural stage 6, generally >80yrs; > 25 ha, or buffering sensitive ecosystems.

Subclasses:

co (conifer dominated) - greater than 75% coniferous species

mx (mixed conifer and deciduous) - a minimum of 25% cover of either group is included in the total tree cover

Seasonally Flooded Agricultural Fields (FS):

Anually flooded cultivated fields or hay fields; important migrating and wintering waterfowl habitat.

Other Mapped Ecosystems

Other mapped ecosystems occur in mosaic with sensitive ecosystems and are not possible to delineate separately at the mapping scale.

Young Forests (YF):

Limited to areas of young forest dispersed among sensitive and other important ecosystems.

Polygon Label

Polygon Number: * indicates if field sample was completed but was not mapped
 2167
 5 Hflf
 3 Mflf
 2 Wflf
 2* Wflf
 SE Class: SE subclass
 20% of polygon (see decide)
 SE subclass

Some polygon labels will have class and subclass repeated up to three times. This indicates that the same ecosystem class and subclass may be occurring within a polygon. More than one site unit can be correlated to a SE class and subclass. Polygon labels on the map do not include the site units. The Sensitive and Terrestrial Ecosystem Labels on the left side of the map provide details about the sites mapped in each polygon.

Ecosystem Components

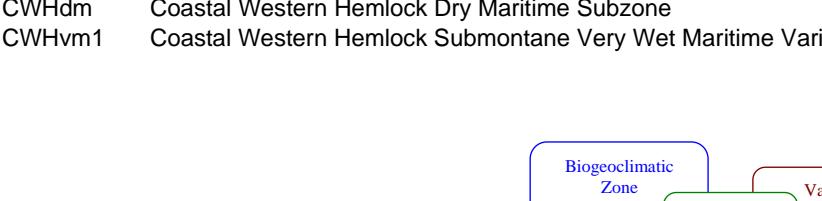
This cartographic product uses Dot Density to indicate where more than one ecosystem class is mapped in a polygon. The number of dots indicates the proportion of the polygon represented by the 2nd and 3rd ecosystem; the colour of the dots indicates the 2nd and 3rd ecosystem class.

The base colour represents the first ecosystem component.
 Coloured dots overlaid upon the base colour indicate a second ecosystem component.

Two colours of dots indicate a second and third ecosystem.

Biogeoclimatic Units

CBFmm Coastal Douglas-fir/Mast Maritime Subzone
 CWHmm Coastal Western Hemlock Very Dry Maritime Variant
 CWHmm Coastal Western Hemlock Dry Maritime Subzone
 CWHmm Coastal Western Hemlock Submaritime Very Wet Maritime Variant

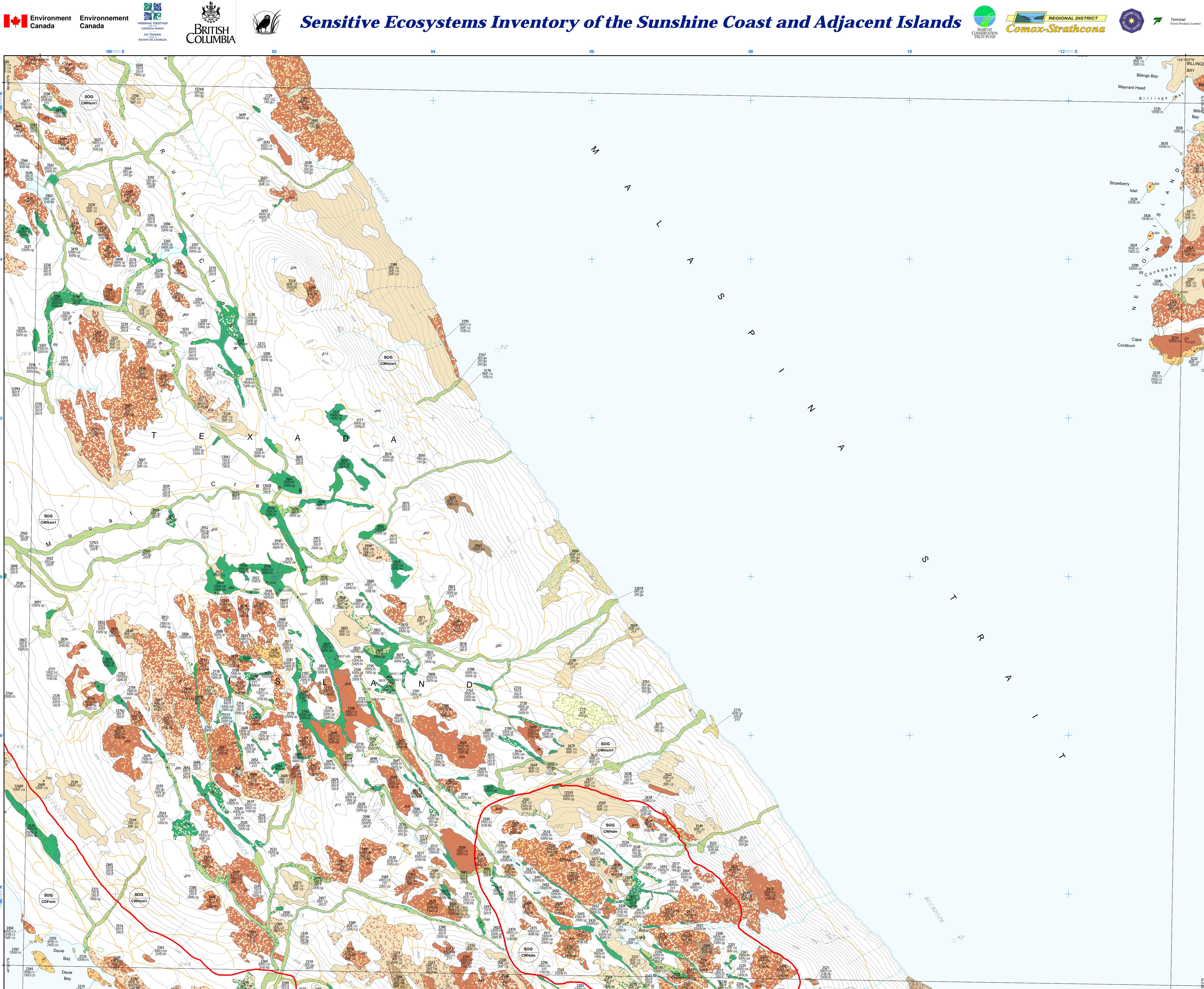


Ecosystems

GEL Georgia Lowlands Ecosystem
 SOG Strait Georgia Ecosystem
 OUF Outer Fiordland Ecosystem
 SPR Southern Pacific Ranges Ecosystem

Map Symbols

- Polygon Boundary
- Biogeoclimatic Boundary
- Ecosystem Boundary
- Study Area Boundary
- Roads
- 20m contours
- TRIM Streams
- Additional streams
- Intermittent/Potential Stream
- Drainage Route
- Field sample point
- Flight line
- Air photo centre



Sensitive and Terrestrial Ecosystems Label

Structural Stage¹

Polygon Number	Species Name
Biogeoclimatic Zone, Subzone & Variant	% polygon
CWHmm	1* component
CWHmm	2* component
CWHmm	3* component
CWHmm	Structural Stage

What is a Sensitive Ecosystem?

For the purpose of this study, an ecosystem is considered to be a portion of the landscape with unique characteristics and vegetation.

Sensitive ecosystems are those which are rare, or those ecosystems which are ecologically important because of the diversity of species they support.

Rationale

Ecologically significant lands and important wildlife habitats are fast disappearing throughout the lowlands surrounding the Strait of Georgia. Intense development pressures fuelled by population and economic growth are fragmenting and degrading sensitive ecosystems. A high proportion of these ecosystems are now designated as "at risk". Sensitive ecosystems typically have high biological diversity and are important for the delivery of ecosystem services for a healthy economy and for social well-being. They regulate climate, clean water, generate and clean soils, recycle nutrients, store carbon, and provide habitat for many species. These ecosystems must be located, identified and mapped. Along the Sunshine Coast the wave-beaten shorelines, coastal plains, rugged mountain slopes, and interior valleys are some of the most sensitive ecosystems. Here one finds coastal temperate rainforests, dry shorelines, herbarious meadows and rocky coastal drifts, wetland and riparian ecosystems.

Data Limitations

The system is not able to detect changes in the existence of sensitive ecosystems, when land-use changes are proposed or detailed site-level assessments are necessary. For sites not field checked, the accuracy of the data depends heavily on the professional judgement and experience of the surveyor and the availability of source data. Because the area is changing rapidly, reference to the date of the information source is advised.

A decision-maker (such as a politician or resource manager): ensure protection of remaining sensitive ecosystems is a priority at all levels and in all planning processes.

Ensuring use of the management planning tools available, such as decision support, permits, tree protection laws, and conservation covenants to protect sensitive ecosystems.

A decision-maker (such as a politician or resource manager): ensure protection of remaining sensitive ecosystems is a priority at all levels and in all planning processes.

Ensuring use of the management planning tools available, such as decision support, permits, tree protection laws, and conservation covenants to protect sensitive ecosystems.

What can be done to protect sensitive ecosystems?

Direct and indirect impacts to the environment must be avoided by:

• Retaining or creating vegetated buffers around sensitive ecosystems to reduce impact distances;

• Controlling land and water access to fragile ecosystems;

• Controlling invasive species;

• Allowing natural disturbances to occur;

• Maintaining water quality;

If development must occur, develop carefully!

Conduct an ecological inventory to identify the existing flora and fauna and any threatened or endangered plant and animal species in the area. Encourage local communities, and habitat features needed to support them.

Ask your expertise to help identify sensitive ecosystems, fundraising, or programs to remove invasive species.

Science is your expertise to help identify sensitive ecosystems, fundraising, or programs to remove invasive species.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

Decision-makers need to be addressed, formulate conservation plans, coordinate with other professionals, and decision-makers that are involved in the protection of sensitive ecosystems.

<div data-bbox="33