

**Ecosystem Sub-Units**

**Central Coast, North Coast and  
Haida Gwaii Plan Areas**

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**Riparian Decision Tool  
Technical Report #2**

**Prepared with Support  
from  
Joint Solutions Project**

This report was produced to provide background information to the Coast Information Team Hydroriparian Planning Guide.

November, 2001

## Technical Report #2

# ECOSYSTEM SUB-UNITS

## Central Coast, North Coast & Haida Gwaii Plan Areas

Prepared for the Joint Solutions Project  
reporting to the Central Coast Land and Resource Management Plan by:

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November 2001

### 1. Introduction

This report is designed as a background document to aid the development of a “Riparian Decision Tool” for the North and Central Coasts of British Columbia. As regional differences should factor into the management prescriptions found in the Decision Tool, it is necessary to delineate distinctive regions in the study areas.

Previous work by Pojar et al., (1999) involved dividing the Central Coast Plan Area (Figure 1) into three ecosystem sub-units. The methods developed by Pojar et al., (1999) are followed here to delineate the North Coast and Haida Gwaii (Figure 1) Plan Areas.

### 2. Central Coast Plan Area

The Central Coast Plan Area was subdivided into three ecosystem sub-units by Pojar et al., (1999) (Table 1). These ecosystem sub-units essentially correspond to the three biogeoclimatic subzones that occur in the Central Coast (**hypermaritime**, **maritime**, and **submaritime**). These subzones coincide with climatic and physiographic regimes.

To subdivide the Central Coast Plan Area into ecosystem sub-units, the region was first divided into the three biogeoclimatic subzones. The hypermaritime subzone occurs on the outer coast, while the submaritime subzone is restricted to the leeward side of the Coast Mountains. The boundary between the hypermaritime and maritime subzones corresponds to the physiographic boundary between the Coastal Trough region (more specifically, the Hecate Lowland sub-region) and the Coast Mountains region. The boundary between the maritime and submaritime subzones runs through the Coast Mountains physiographic region (Figure 2). The ecosystem sub-units were identified based on these physiographic and biogeoclimatic subzone boundaries.

This approach is similar to the ecoregion classification that has been developed and mapped for British Columbia (Demarchi, 1988; Demarchi et al., 1990). Ecoregion classification is based on the interaction of macroclimatic processes (Marsh, 1988) and physiography (Holland, 1976; Mathews 1986). The major practical difference between the ecoregion classification and the biogeoclimatic ecosystem classification (BEC) is that, in mountainous

terrain, ecoregion classification stratifies the landscape into geographical units that circumscribe all elevations, whereas BEC delineates altitudinal belts of ecological zones within geographical units.

### 3. North Coast and Haida Gwaii

Following Pojar et al., (1999), physiographic and biogeoclimatic subzone boundaries were delineated for the North Coast and Haida Gwaii (Figure 2).

Haida Gwaii has two major physiographic regions, the Coastal Trough (corresponding to the North and Northeast region of Graham Island) and the Insular Mountains (corresponding to the Southern region of Graham Island and all of Moresby Island). Only hypermaritime subzones occur on Haida Gwaii (Meidinger and Pojar, 1991). The North Coast Plan Area has two major physiographic regions, the Coastal Trough and the Coast Mountains. The boundary between these two regions also represents the split between the hypermaritime and maritime biogeoclimatic subzones. The subarctic biogeoclimatic subzone does not occur within the North Coast LRMP.

### 4. Summary

Table 1 summarizes the ecosystem sub-units established for the Central Coast, North Coast and Haida Gwaii. The ecosystem sub-units of the Central Coast were delineated by Pojar et al., (1999). The methods developed by Pojar et al., (1999) were followed to delineate the North Coast and Haida Gwaii. Ecosystem sub-units were identified based on physiographic and biogeoclimatic boundaries (Figure 2 and Table 1).

**Table 1.** Ecosystem Sub-Units, Biogeoclimatic Subzones, and Physiographic Regions

| LRMP Area     | Ecosystem Sub-Unit    | Biogeoclimatic Subzone | Physiographic Region |
|---------------|-----------------------|------------------------|----------------------|
| Central Coast | Inner Coast Mountains | Subarctic              | Coast Mountains      |
|               | Outer Coast Mountains | Maritime               | Coast Mountains      |
|               | Hecate Depression*    | Hypermaritime          | Coastal Trough       |
| Haida Gwaii   | Insular Mountains     | Hypermaritime          | Insular Mountains    |
|               | Hecate Depression     | Hypermaritime          | Coastal Trough       |
| North Coast   | Hecate Depression     | Hypermaritime          | Coastal Trough       |
|               | Outer Coast Mountains | Maritime               | Coast Mountains      |

\*Pojar et al., (1999) originally termed this sub-unit ‘Hecate Lowland’. ‘Hecate Depression’ is a more general term that includes both the Hecate Lowland and Queen Charlotte Lowland sub-regions (Holland, 1976).

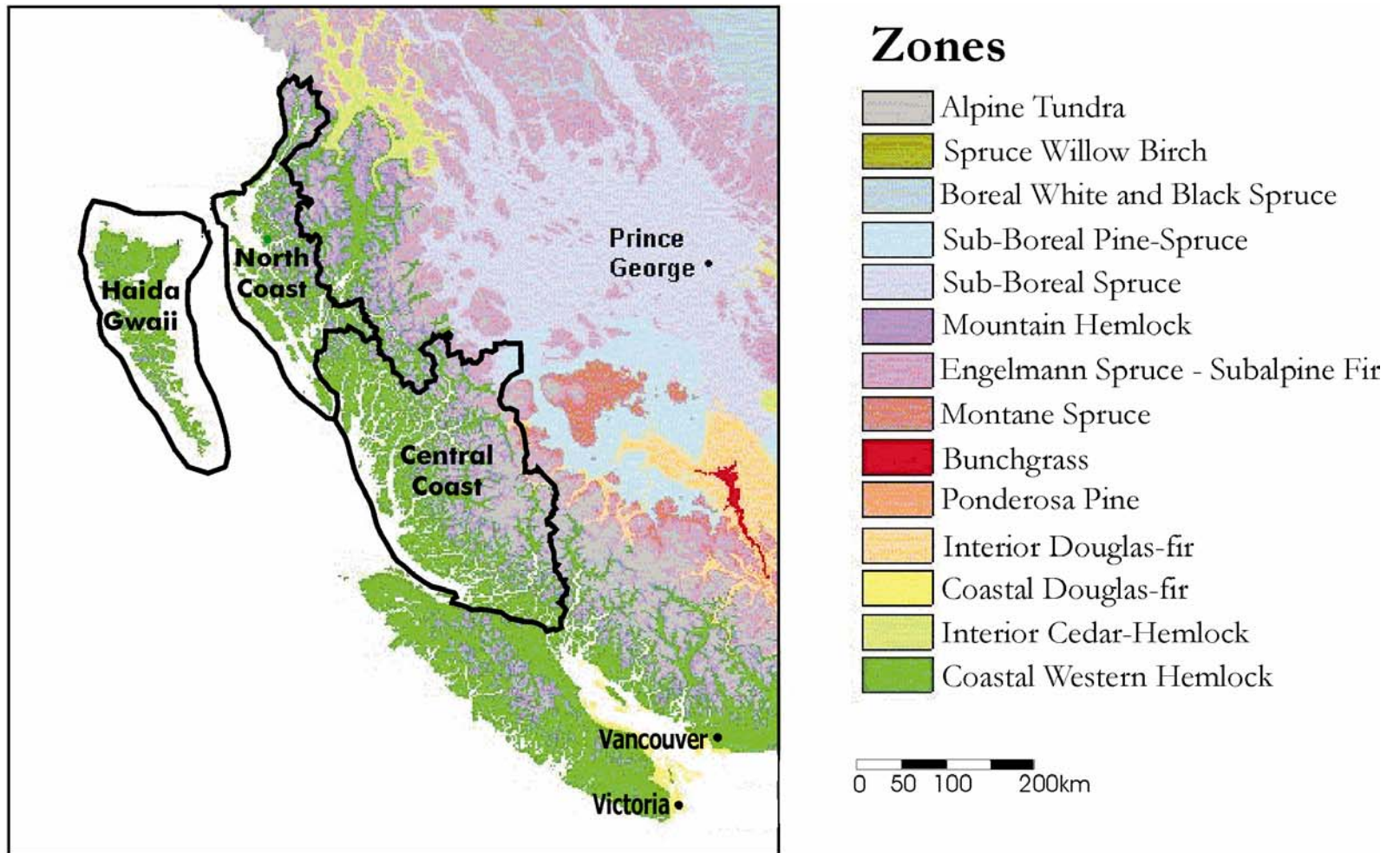


Figure 1. Biogeoclimatic Zones of British Columbia (LRMP Boundaries superimposed)

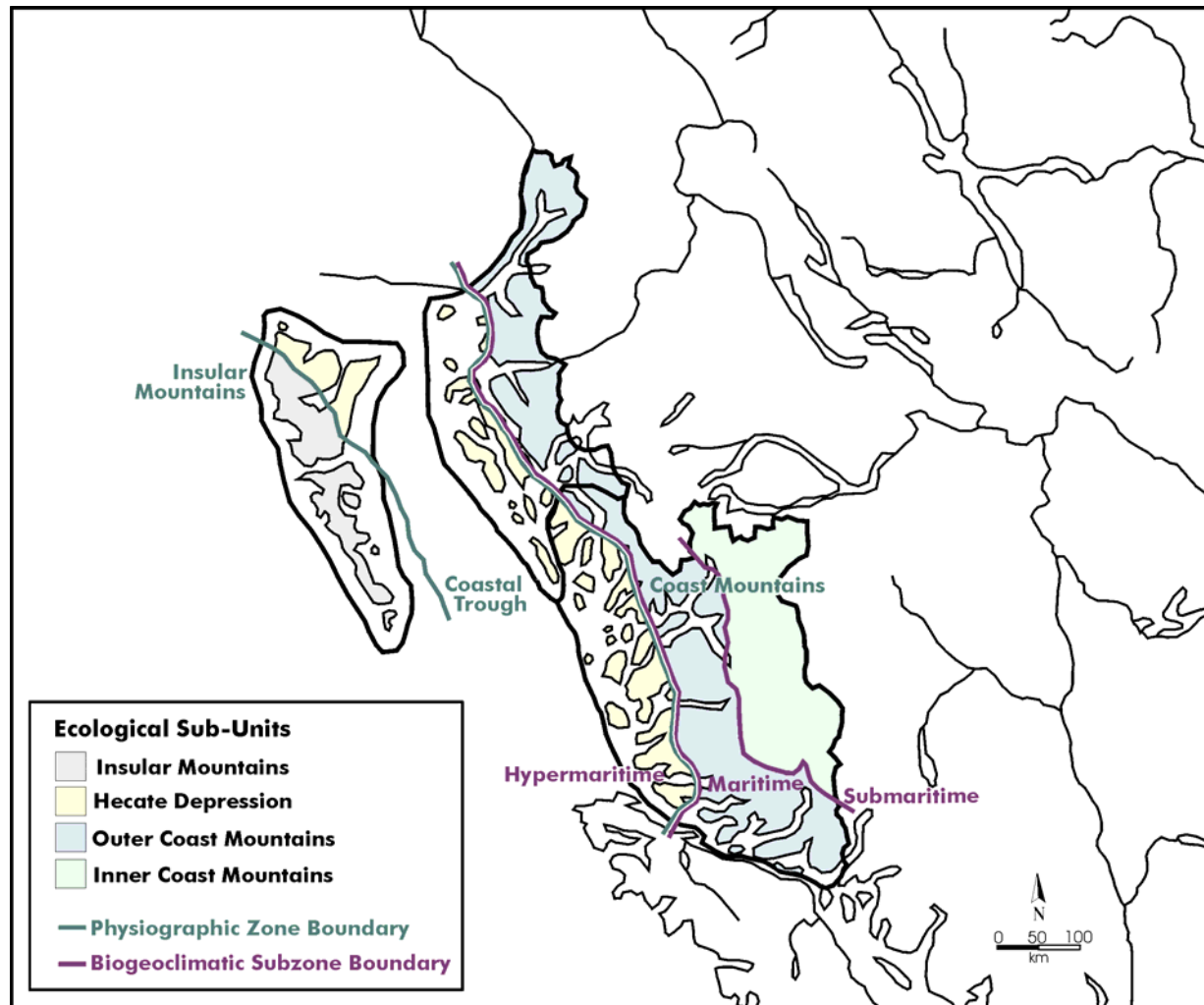


Figure 2. Ecological Sub-units of the Central Coast, North Coast and Haida Gwaii (LRMP, Physiographic, and Biogeoclimatic Boundaries Superimposed)

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