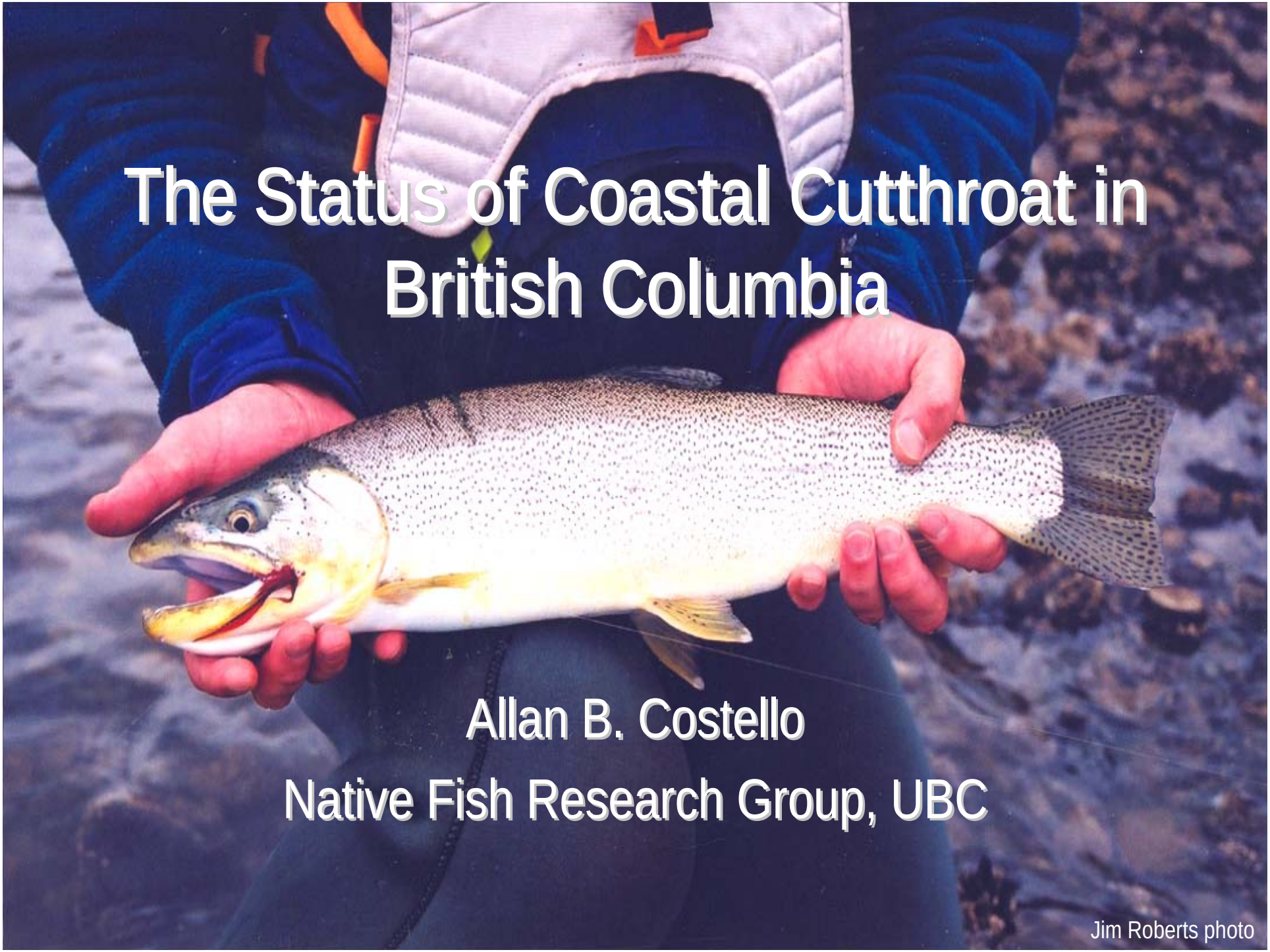
The Status of Coastal Cutthroat in British Columbia



Allan B. Costello

Native Fish Research Group, UBC

Jim Roberts photo

1995

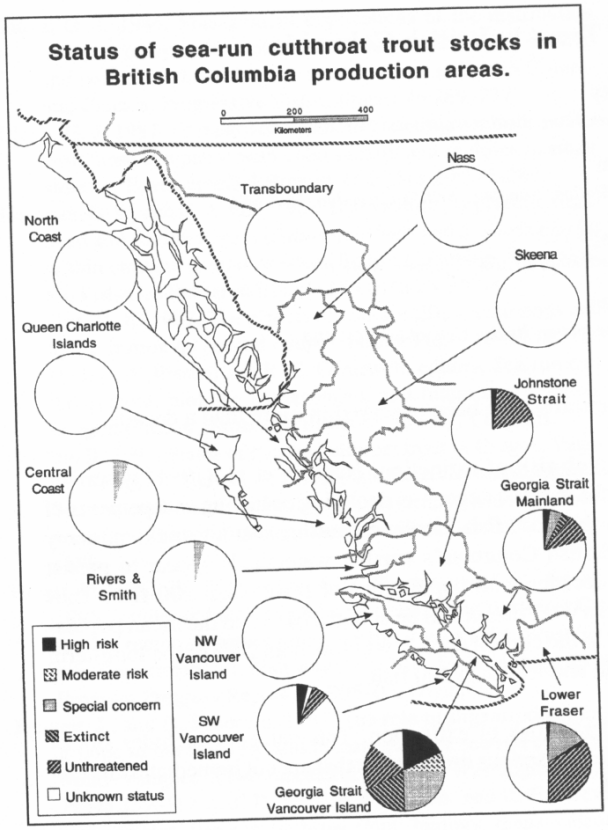


Figure 1.—Status of sea-run cutthroat trout stocks in British Columbia production areas.

… and 2005?

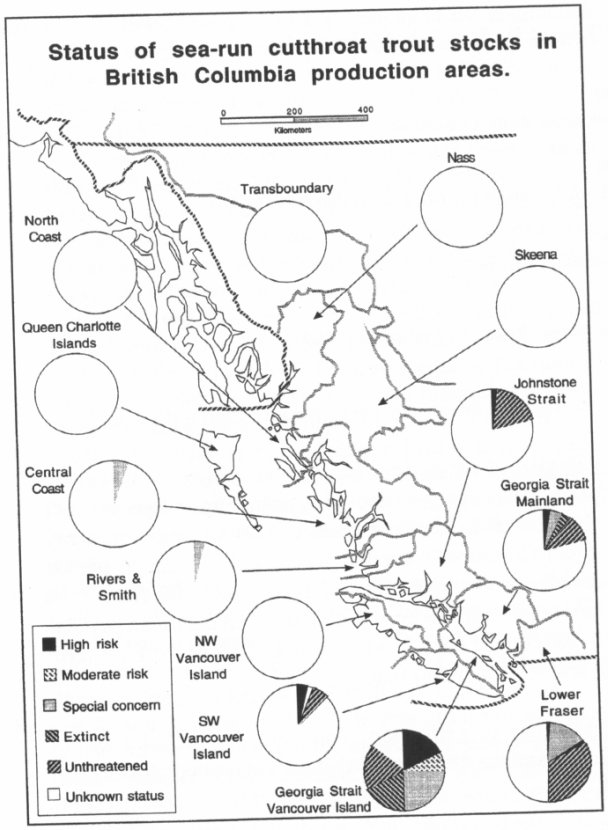


Figure 1.—Status of sea-run cutthroat trout stocks in British Columbia production areas.

Outline

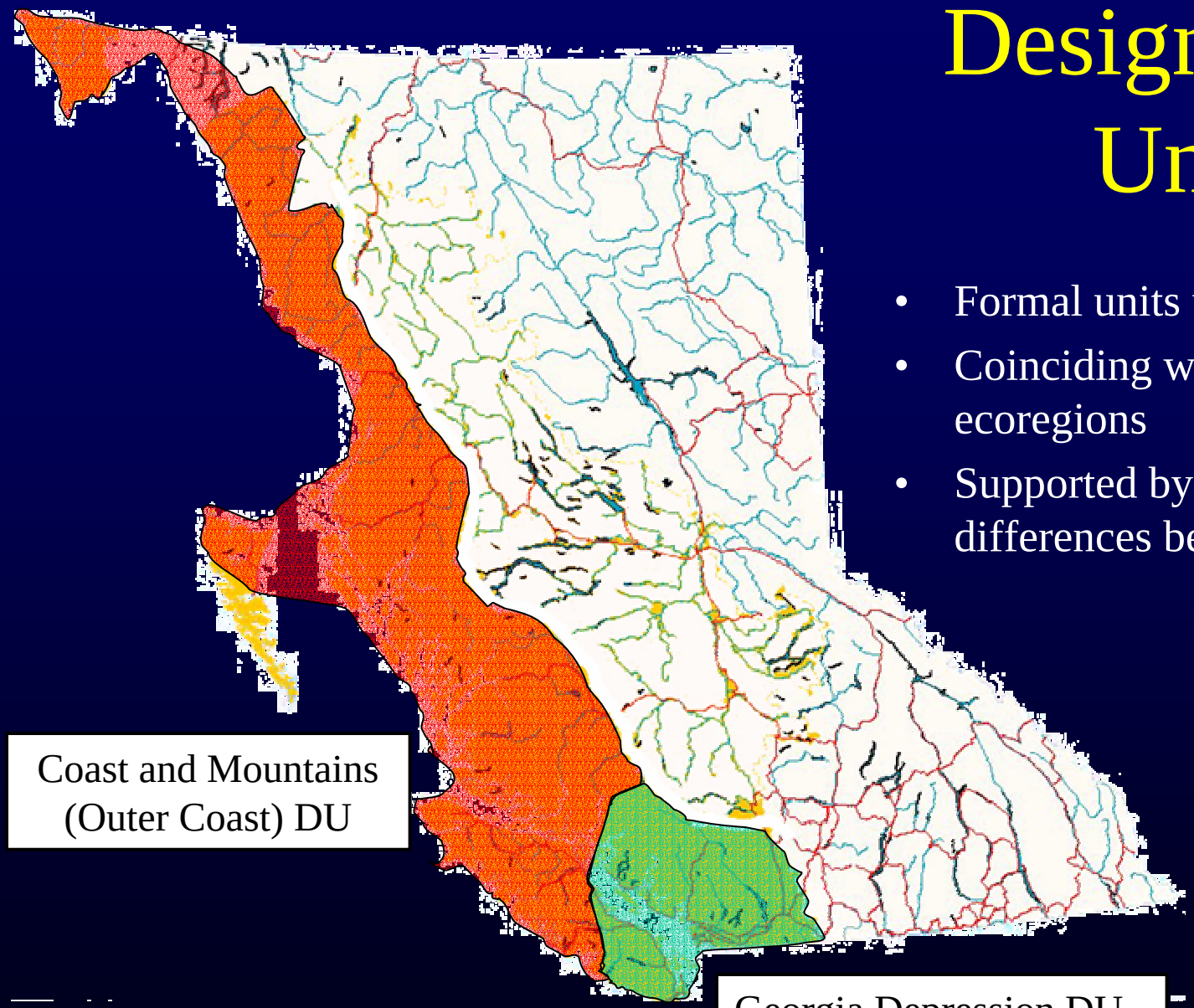
- General distribution
- Regional Trends
- Population trends – Salmon River
- Limiting Factors
- Management Initiatives

General Distribution

- Most low-lying areas, islands
- Poorly described outside Georgia Basin

Designatable Units

- Formal units under SARA
- Coinciding with provincial ecoregions
- Supported by genetic, LH differences between regions



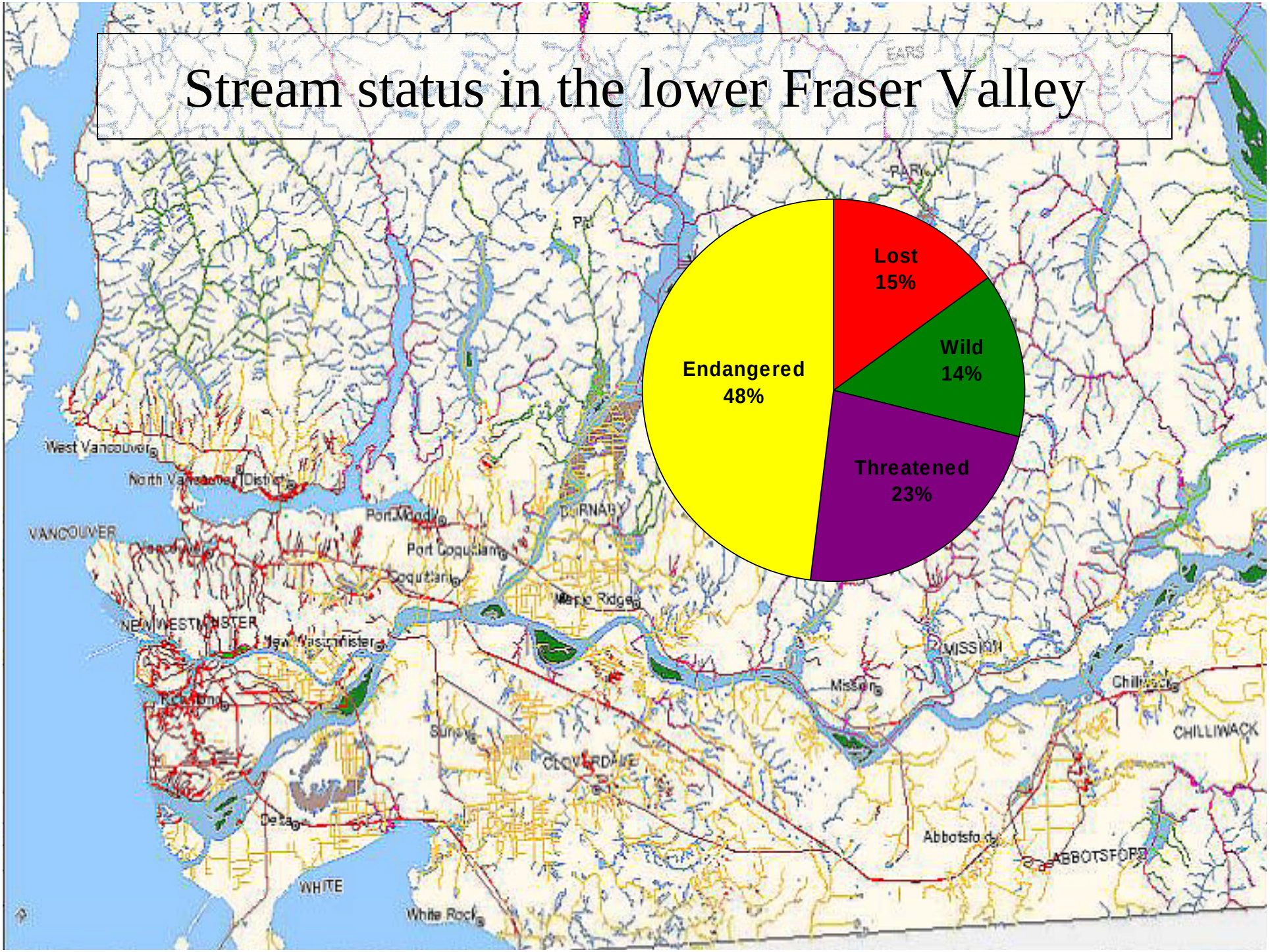
Outer Coast DU

- Remote area
- Main Issues
  - Habitat loss (logging, mineral extraction) and associated road networks
  - Overharvesting/ bycatch near urban areas
- Likely contains a mix of stable and declining pops but little status info

Georgia Basin DU

- Heavily populated area, urbanized
- Threats primarily habitat-related
  - Development pressures
  - Increased water withdrawals
  - Damaging agricultural practices
  - Human population growth

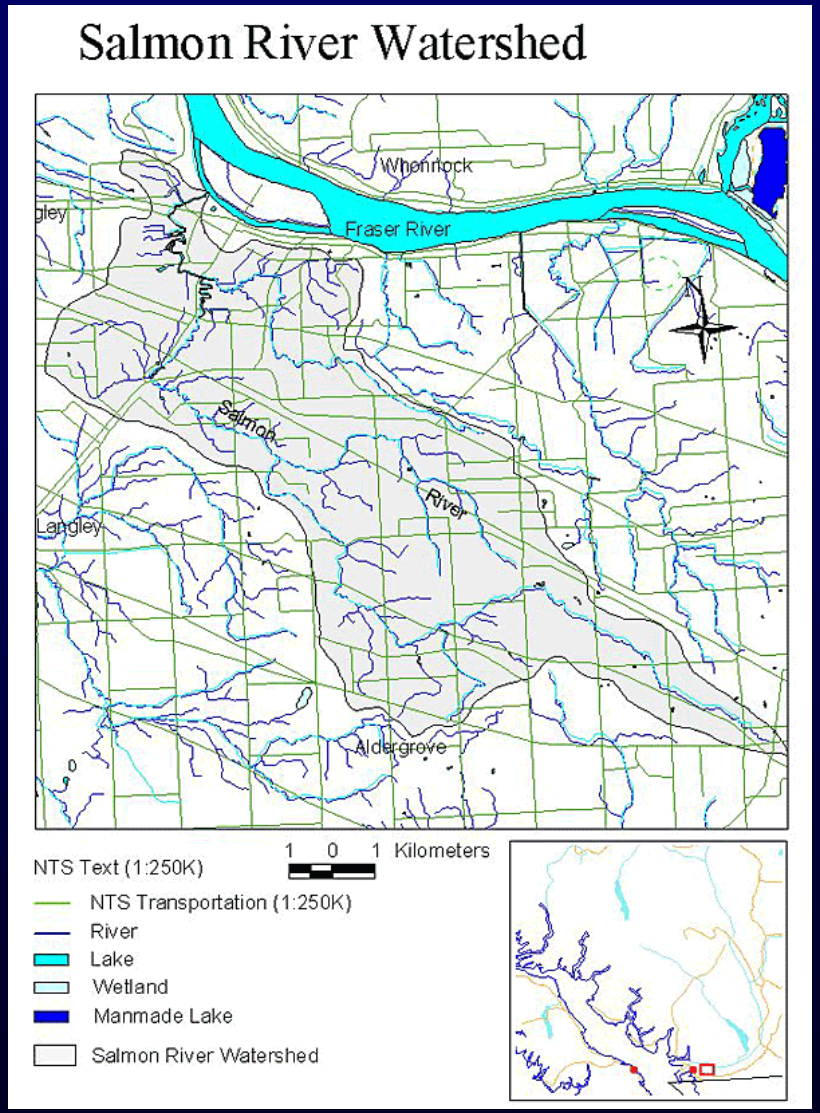
Stream status in the lower Fraser Valley



East Coast Vancouver Island

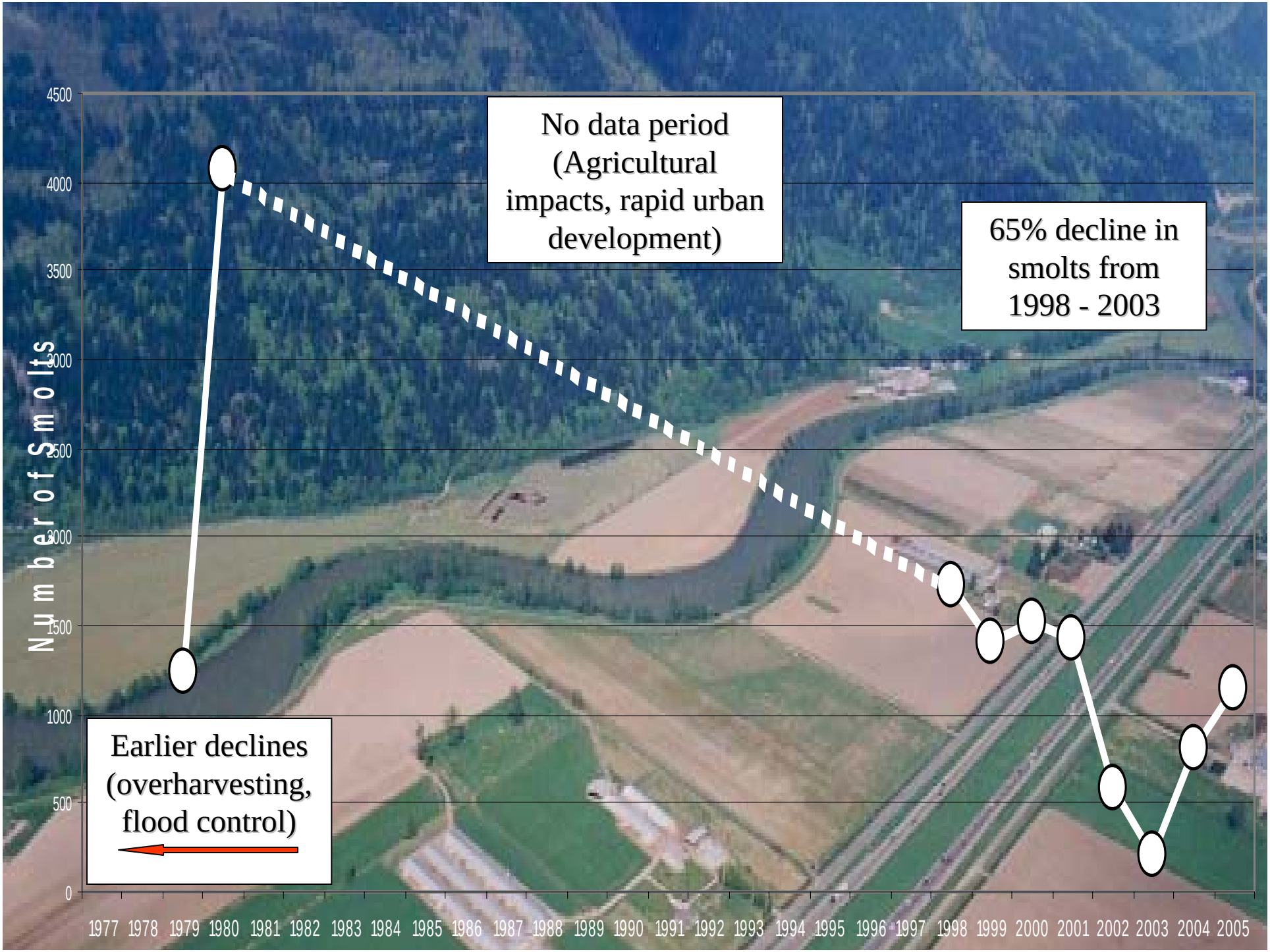
- Similar habitat trends apparent:
  - 155/ 165 (94%) with insufficient summer flows (domestic/ agricultural withdrawals)
  - 41% with reduced pool area
  - 93% with reduced LWD
  - 50% with reduced instream cover
  - 88% with excessive fines

(Reid et al. 2000)



Salmon River Trend data

- Enters Fraser River near Fort Langley
- Good CCT producer
- DFO index stream since 1998
- Not stocked


No data period (Agricultural impacts, rapid urban development)
65% decline in smolts from 1998 - 2003
Earlier declines (overharvesting, flood control)
Number of Smolts
4500
4000
3500
3000
2500
2000
1500
1000
500
0
1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005

Georgia Basin CCT

- Significant habitat losses
- Documented population declines
- Reduced point counts and fisheries catches suggest….

30% increase in the number of extirpated and endangered stocks since 1995

Limiting Factors in BC

- Habitat Loss
  - Population growth (+35% by 2020)
  - Unconstrained land, water use
  - Coordinated “small stream” protection lacking
  - Legislation “reactive” as opposed to “proactive”

Limiting Factors in BC (cont.)

- Little data for typical CCT systems
  - Few index streams, most stocked
- Expansion of hatchery programs
  - CCT, STH, COHO
  - Competition, residualism
  - Hybridization

Management class for gazetted streams containing CCT (FISS data, 2003) and inferred levels of hybridization

Region	Hatchery Production	Augmented	Wild	Not specified	Hybrid Levels
Vancouver Island	21%	3%	27%	49%	9-29%
Lower BC Mainland	16%	3%	37%	43%	9%
Cariboo-Central Coast	2%	<1%	17%	74%	7%
North Coast	14%	2%	26%	58%	4%

Management Initiatives

- Sportfishing regulations
  - Stream closures
  - Single, barbless hook
  - Bait ban (province-wide in 2006-7?)
  - Limits of 2-5/day; 30 cm minimum

Management Initiatives (cont.)

- Numerous “small-stream” initiatives, stewardship groups
- community mapping projects (e.g. – South Coast Cutthroat Atlas)
- Recent management reviews: Lower Fraser, Bella Coola CCT

Future directions

- Addressing the information gap:
  - Status of individual populations
  - LH, genetic profiling
  - Hybridization levels
- Address habitat protection:
  - Coordination, enabling, application of land-water regulations
  - Land acquisition, protection

Status summary

- Outer Coast – many pops likely stable but little available data; declines expected on west coast of Vancouver Island

- Georgia Basin –habitat loss and declines in catches suggest that many pops at high risk for extirpation (increase of ~30% in extirpated and threatened stocks since 1995)

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