# UPDATE ON THE STATUS OF ANTI-SAPSTAIN TREATMENTS

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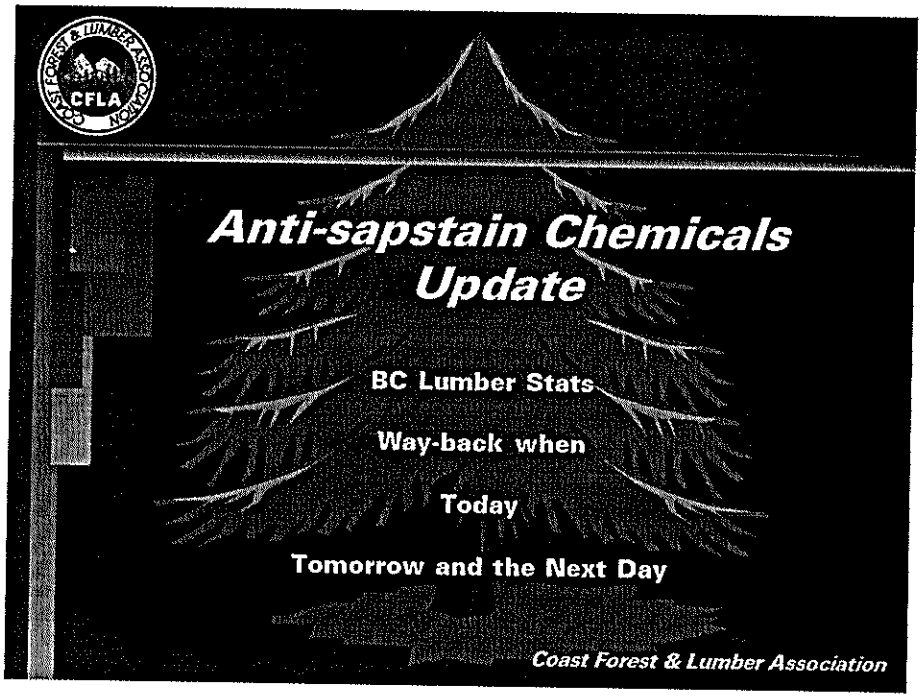
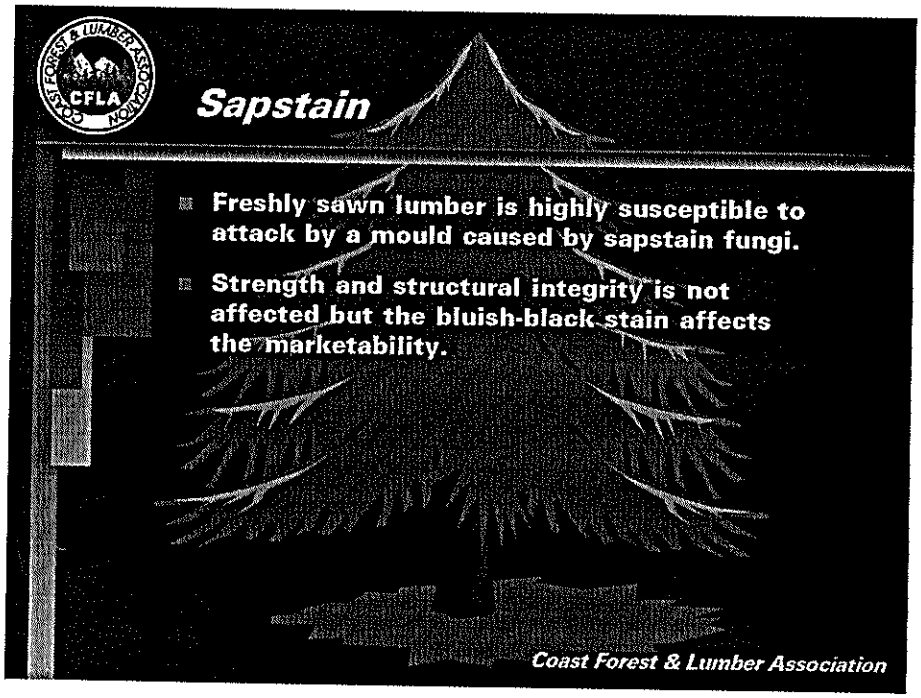
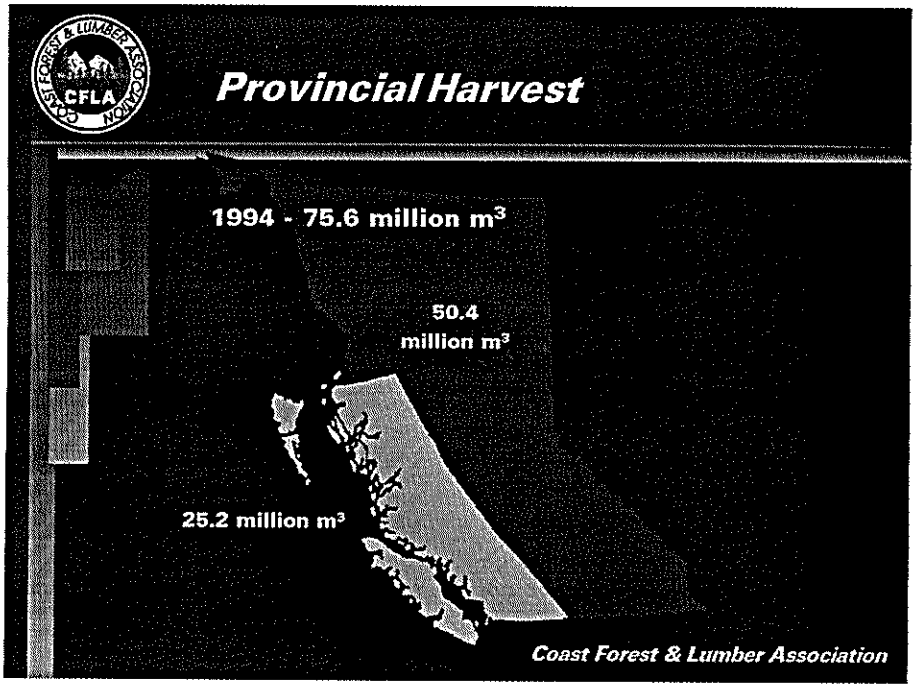
**Coast Forest & Lumber Association, Vancouver, B.C. V7T 1S7**




CFLA
Provincial Harvest
1994 - 75.6 million m³
50.4
million m³
25.2 million m³
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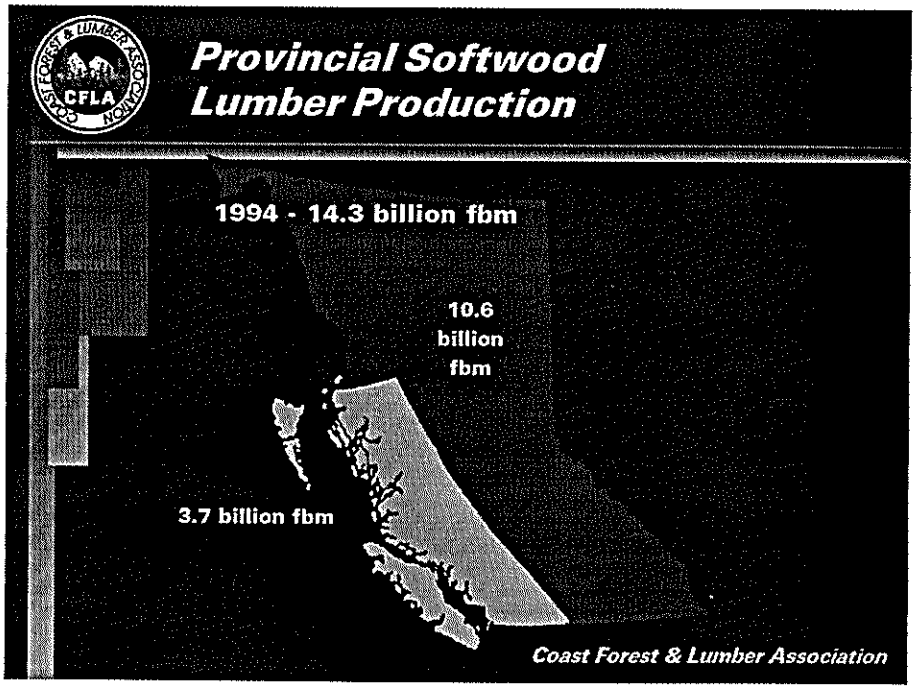
CFLA
Provincial Softwood
Lumber Production
1994 - 14.3 billion fbm
10.6
billion
fbm
3.7 billion fbm
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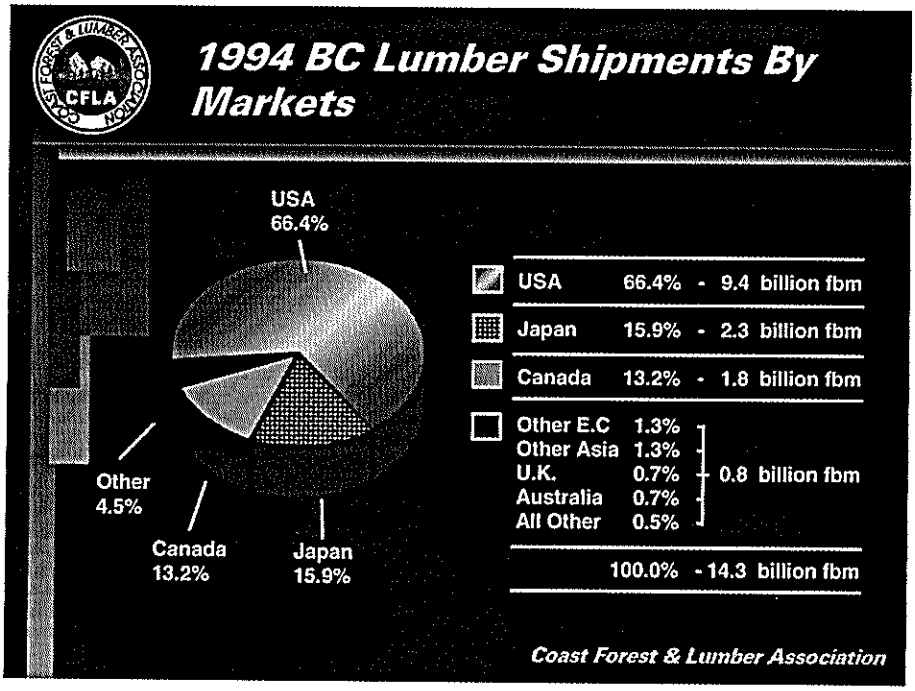
1994 BC Lumber Shipments By Markets
USA
66.4%
Other
4.5%
Canada
13.2%
Japan
15.9%
USA 66.4% - 9.4 billion fbm
Japan 15.9% - 2.3 billion fbm
Canada 13.2% - 1.8 billion fbm
Other E.C 1.3%
Other Asia 1.3%
U.K. 0.7%
Australia 0.7%
All Other 0.5%
0.8 billion fbm
100.0% - 14.3 billion fbm
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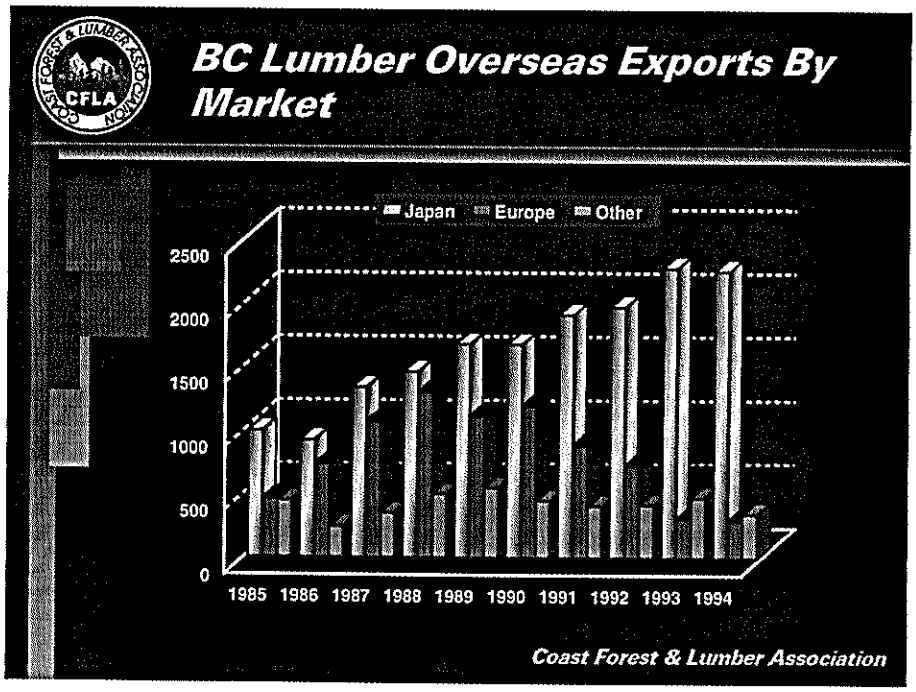
BC Lumber Overseas Exports By Market
Japan
Europe
Other
2500
2000
1500
1000
500
0
1985 1986 1987 1988 1989 1990 1991 1992 1993 1994
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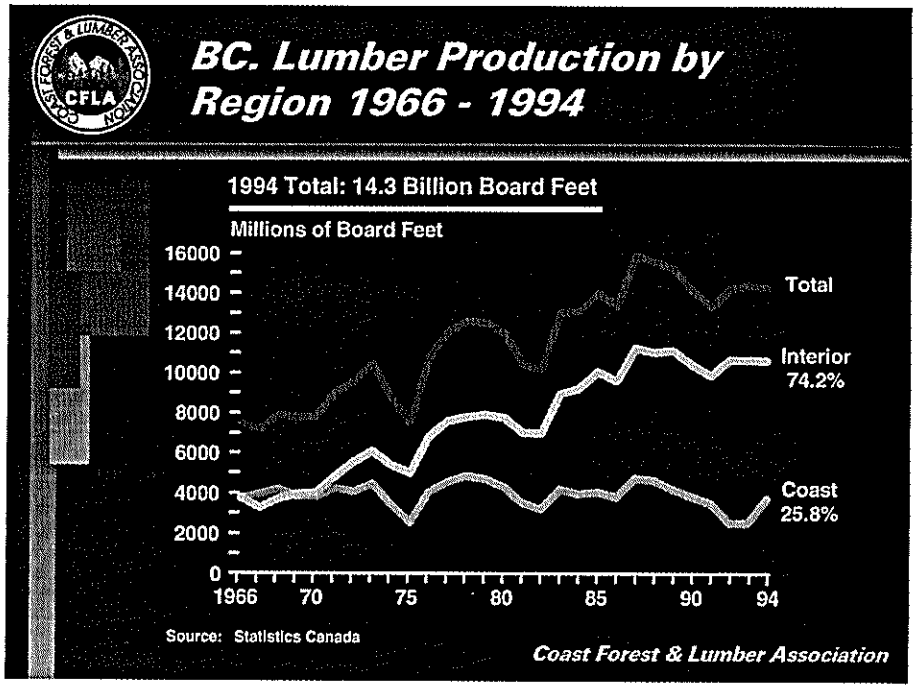
BC. Lumber Production by Region 1966 - 1994
1994 Total: 14.3 Billion Board Feet
Millions of Board Feet
16000
14000
12000
10000
8000
6000
4000
2000
0
1966
70
75
80
85
90
94
Total
Interior 74.2%
Coast 25.8%
Source: Statistics Canada
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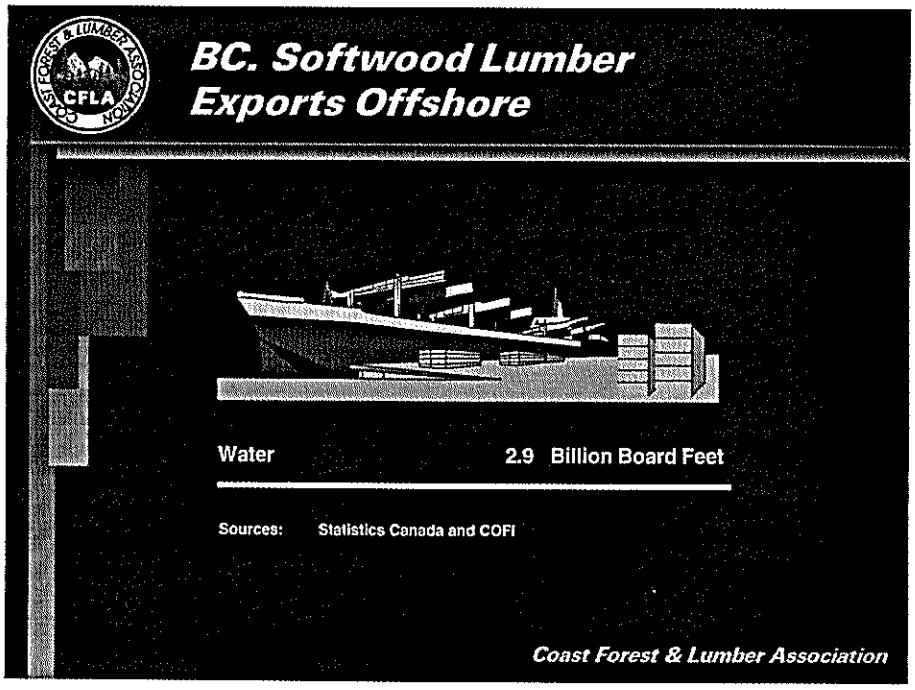
BC. Softwood Lumber Exports Offshore
Water
2.9 Billion Board Feet
Sources: Statistics Canada and COFI
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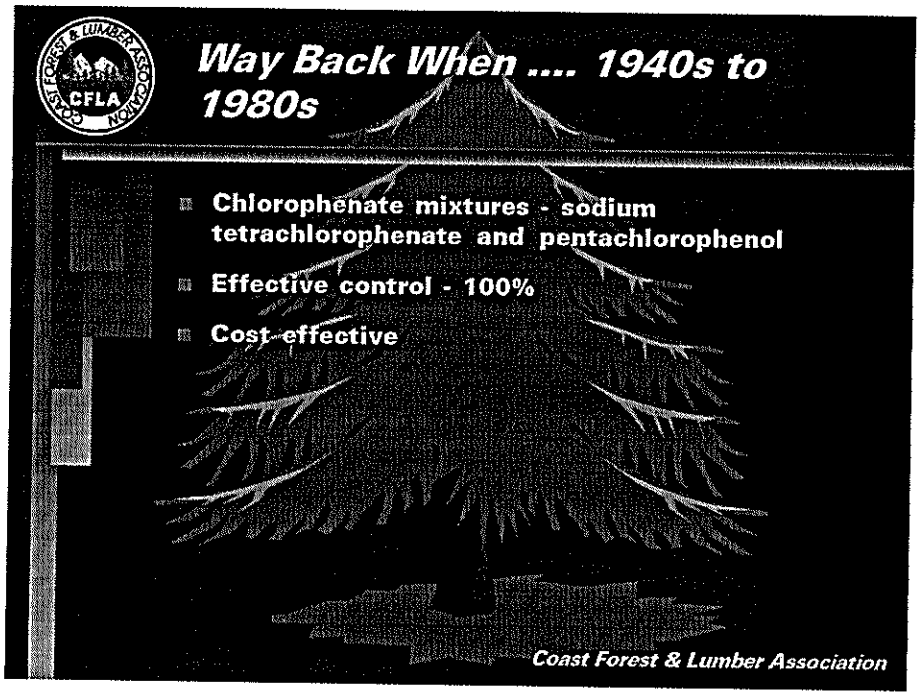
CFLA
Way Back When .... 1940s to 1980s
Chlorophenate mixtures - sodium tetrachlorophenate and pentachlorophenol
Effective control - 100%
Cost effective
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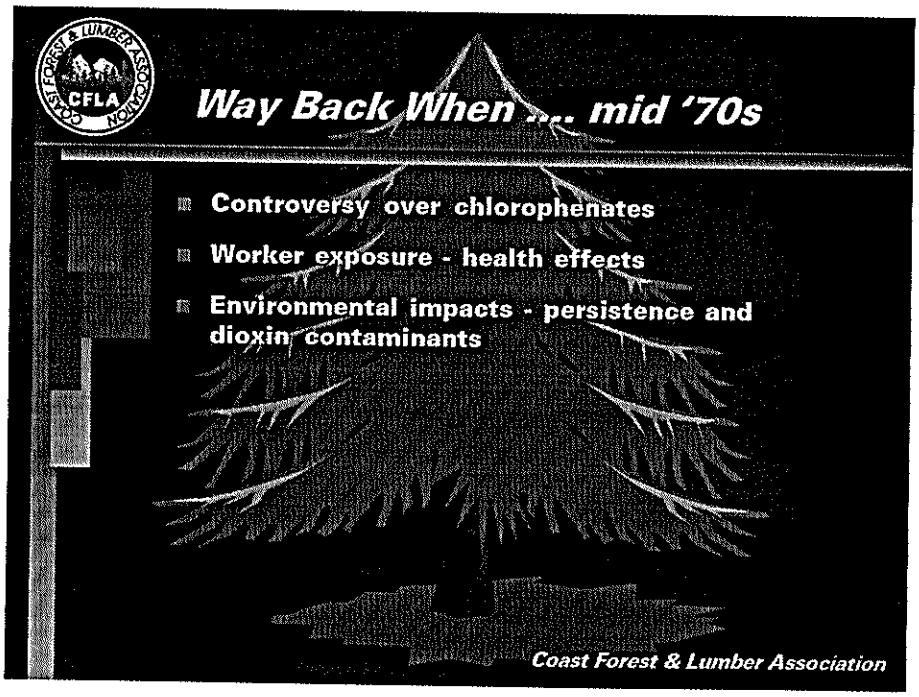
CFLA
Way Back When ... mid '70s
Controversy over chlorophenates
Worker exposure - health effects
Environmental impacts - persistence and dioxin contaminants
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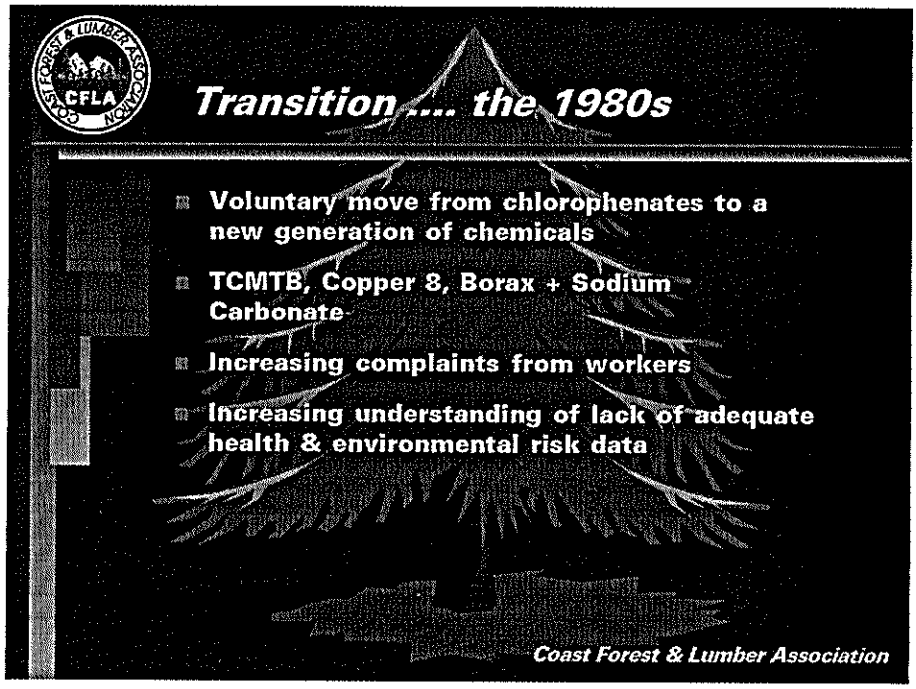
CFLA
Transition .... the 1980s
Voluntary move from chlorophenates to a new generation of chemicals
TCMTB, Copper 8, Borax + Sodium Carbonate
Increasing complaints from workers
Increasing understanding of lack of adequate health & environmental risk data
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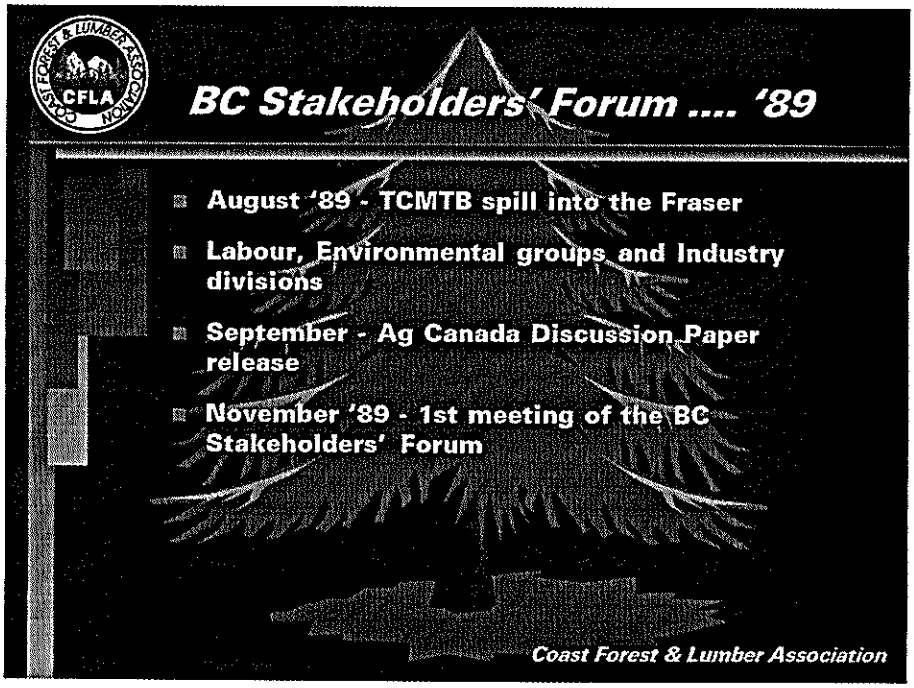
CFLA
BC Stakeholders' Forum .... '89
August '89 - TCMTB spill into the Fraser
Labour, Environmental groups and Industry divisions
September - Ag Canada Discussion Paper release
November '89 - 1st meeting of the BC Stakeholders' Forum
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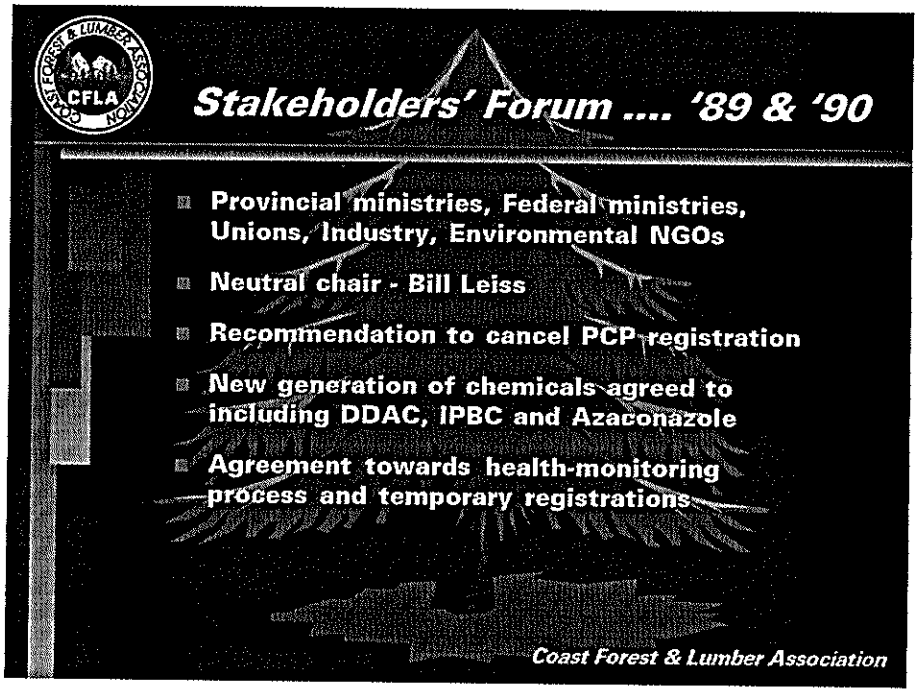
CFLA
Stakeholders' Forum .... '89 & '90
Provincial ministries, Federal ministries, Unions, Industry, Environmental NGOs
Neutral chair - Bill Leiss
Recommendation to cancel PCP registration
New generation of chemicals agreed to including DDAC, IPBC and Azaconazole
Agreement towards health-monitoring process and temporary registrations
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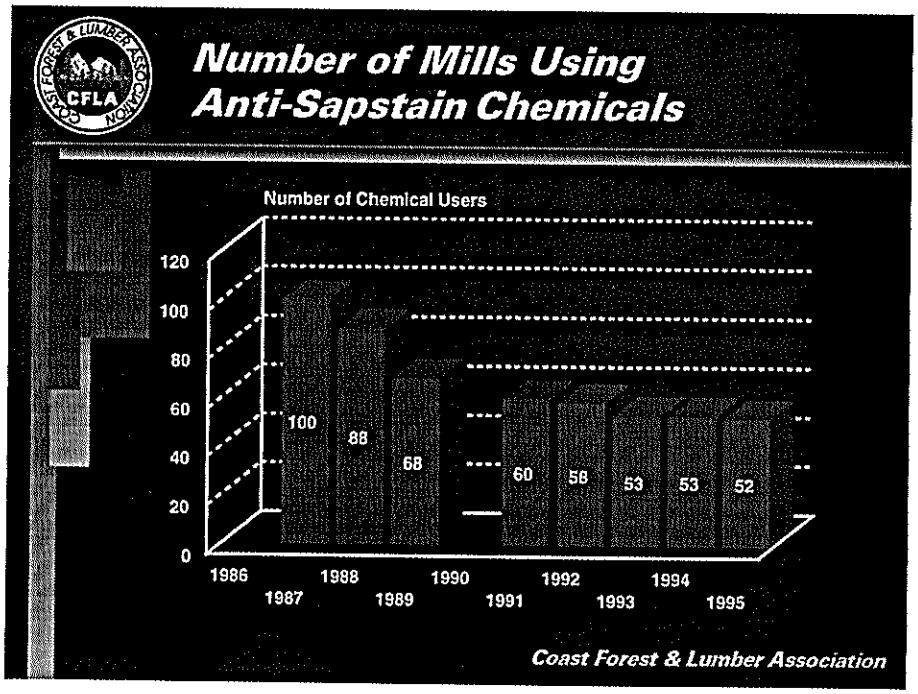
CFLA
Number of Mills Using Anti-Sapstain Chemicals
Number of Chemical Users
120
100
80
60
40
20
0
100
88
68
60
58
53
53
52
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
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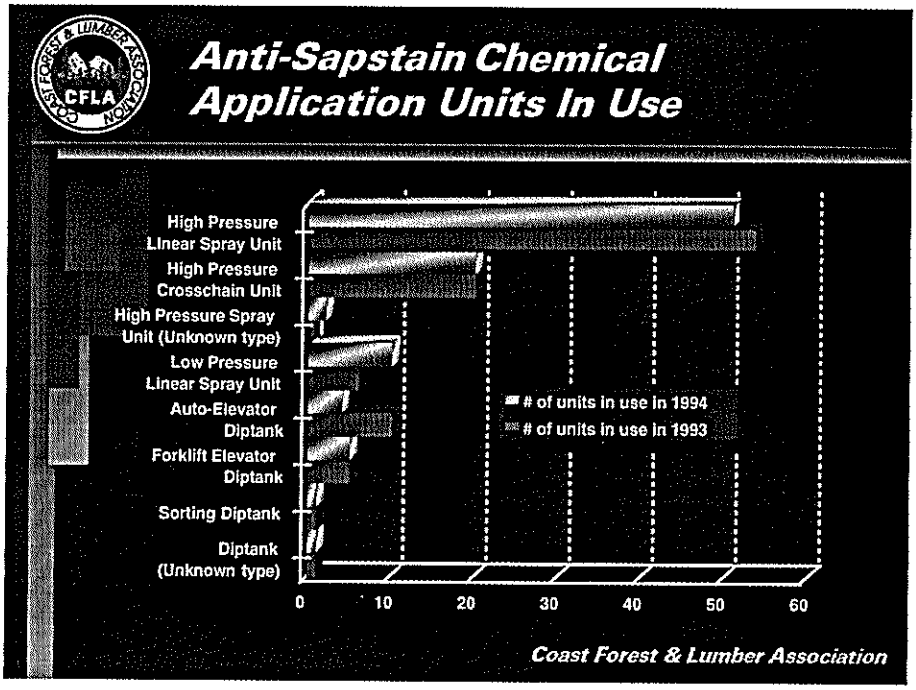
Anti-Sapstain Chemical Application Units In Use
High Pressure Linear Spray Unit
High Pressure Crosschain Unit
High Pressure Spray Unit (Unknown type)
Low Pressure Linear Spray Unit
Auto-Elevator Diptank
Forklift Elevator Diptank
Sorting Diptank
Diptank (Unknown type)
# of units in use in 1994
# of units in use in 1993
0
10
20
30
40
50
60
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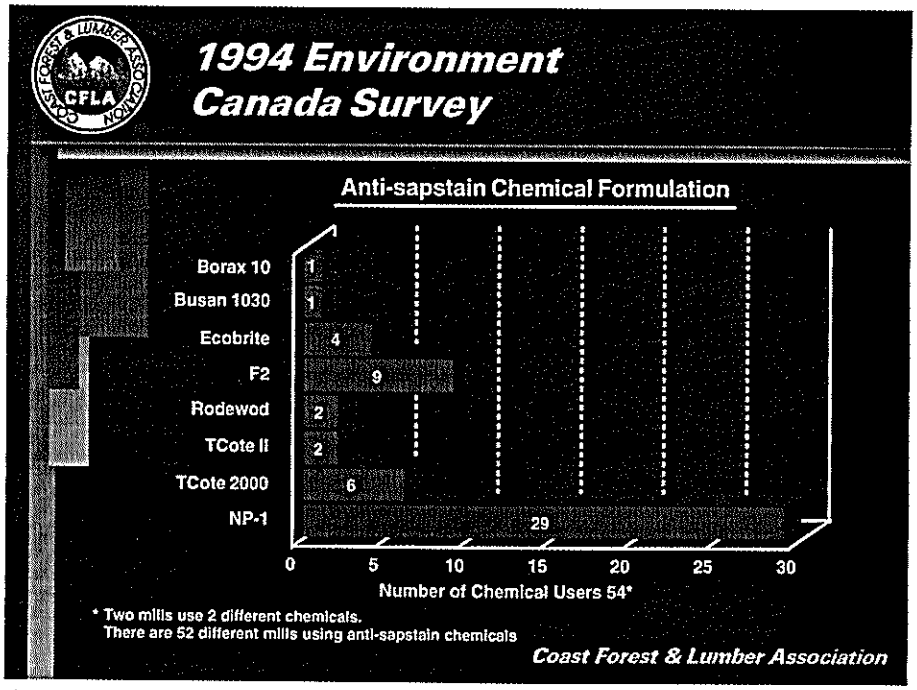
1994 Environment Canada Survey
Anti-sapstain Chemical Formulation
Borax 10
Busan 1030
Ecobrite
F2
Rodewod
TCote II
TCote 2000
NP-1
1
1
4
9
2
2
6
29
0
5
10
15
20
25
30
Number of Chemical Users 54*
* Two mills use 2 different chemicals.
There are 52 different mills using anti-sapstain chemicals
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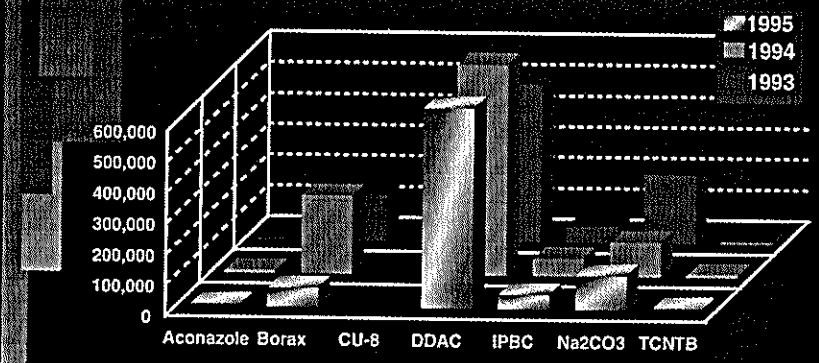
## Quantity of Anti-Sapstain Chemical Formulation Used in BC in 1994

| EPD Region[2] | # of Mills using Chemicals | Quantity of Anti-Sapstain Chemical Formulation Used (kg) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Borax 10 MOL | Busan 1030 | Ecobrite | F2 | NP-1 | Rodewod 200 EC | Timbercote II | Timbercote 2000 | Total |
| Active Ingredient | - | 100% Disodium Tetraborate Decahydrate | 30% TCMTB | 4% Disodium Tetraborate Decahydrate 20% $Na_2CO_3$ | 16.8% Disodium Octaborate Tetrahydrate 11.4 % DDAC | 65% DDAC 7.7% IPBC | 20% Azaconazole | 20% DDAC | 28% DDAC | |
| Density (Kg/L) | - | 1.73 | 1.08 | 1.24 | 1.075 | 0.9314 | 1.1 | 0.971 | 0.971 | |
| Vanisle | 22 | 0 | 756 | 0 | 272,100 | 330,250 | 0 | 29,621 | 115,340 | 748,070 |
| LwrMain | 20 | 47,700 | 0 | 0 | 432,030 | 207,920 | 18,250 | 0 | 48,956 | 754,870 |
| Skeena | 6 | 0 | 0 | 453,920 | 10,274 | 0 | 4,500 | 0 | 100,950 | 569,640 |
| Southin | 3 | 0 | 0 | 68,130 | 0 | 406 | 0 | 0 | 3,852 | 72,388 |
| North In | 1 | 0 | 0 | 26,680 | 0 | 0 | 0 | 0 | 0 | 26,680 |
| Kootnay | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NIntSub | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SIntSub | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 52 | 47,709 | 756 | 548,730 | 714,400 | 538,580 | 22,760 | 29,621 | 269,100 | 2,171,600 |

*Coast Forest & Lumber Association*

## Quantity of Anti-Sapstain Active Ingredients Used in BC




Borax is the total Disodium Tetraborate Decahydrate and Disodium Octaborate Tetrahydrate used.

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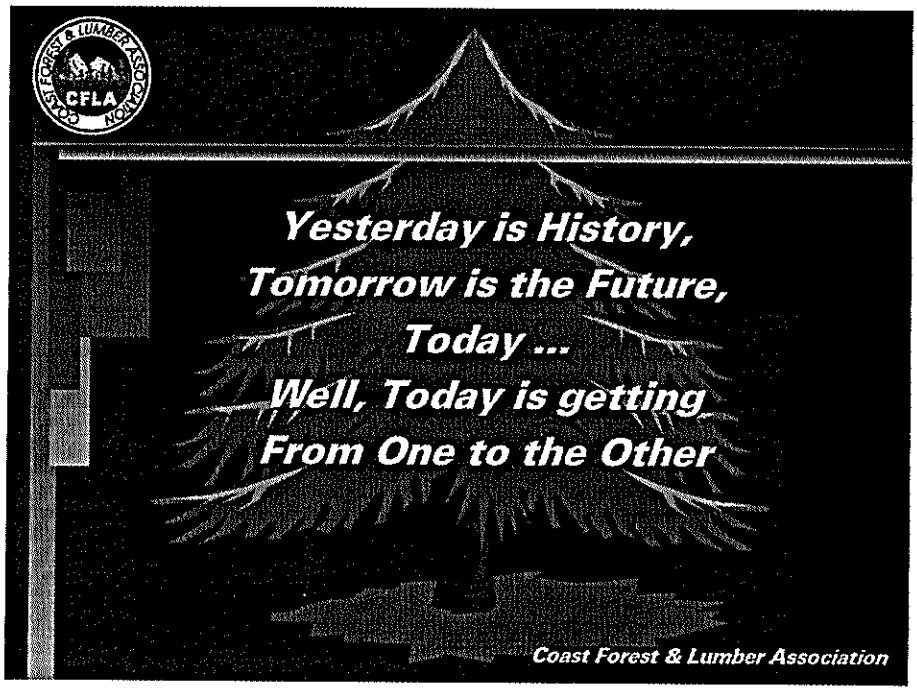
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CFLA
Yesterday is History,
Tomorrow is the Future,
Today ...
Well, Today is getting
From One to the Other
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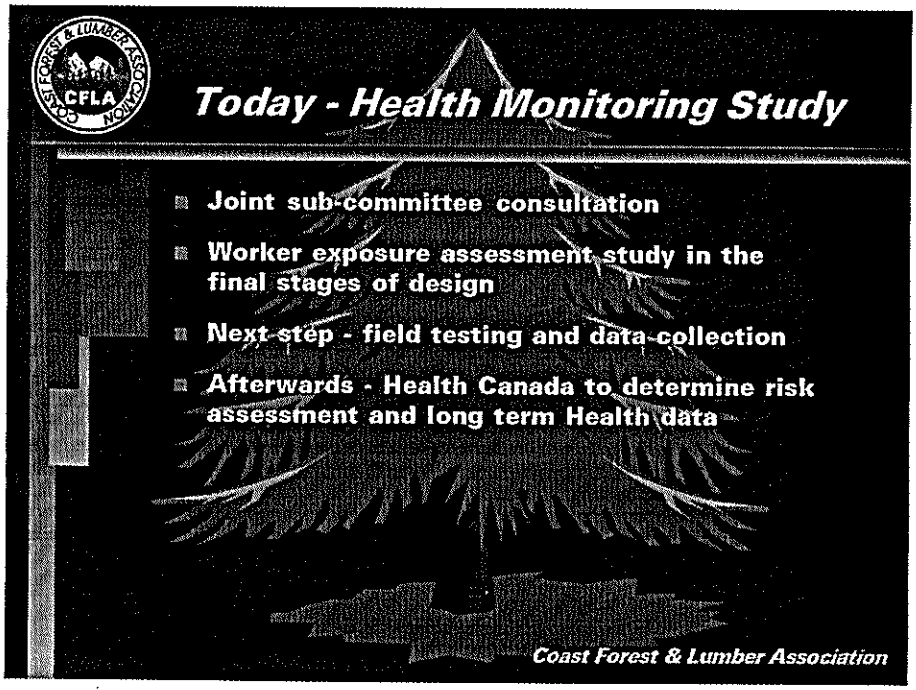
COAST FOREST & LUMBER ASSOCIATION
CFLA
Today - Health Monitoring Study
Joint sub-committee consultation
Worker exposure assessment study in the final stages of design
Next step - field testing and data-collection
Afterwards - Health Canada to determine risk assessment and long term Health data
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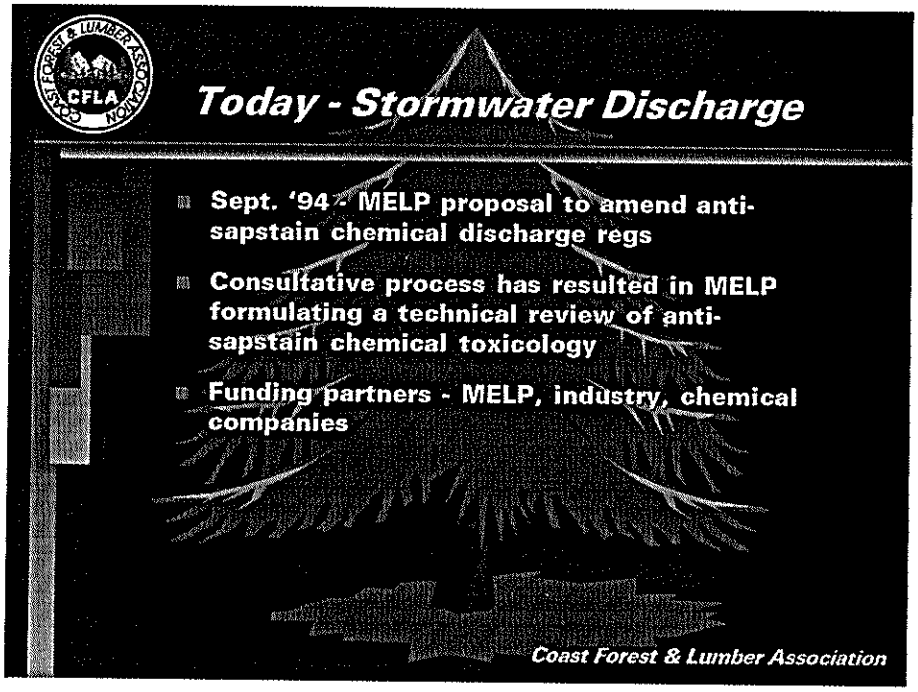
Today - Stormwater Discharge
Sept. '94 - MELP proposal to amend anti-sapstain chemical discharge regs
Consultative process has resulted in MELP formulating a technical review of anti-sapstain chemical toxicology
Funding partners - MELP, industry, chemical companies
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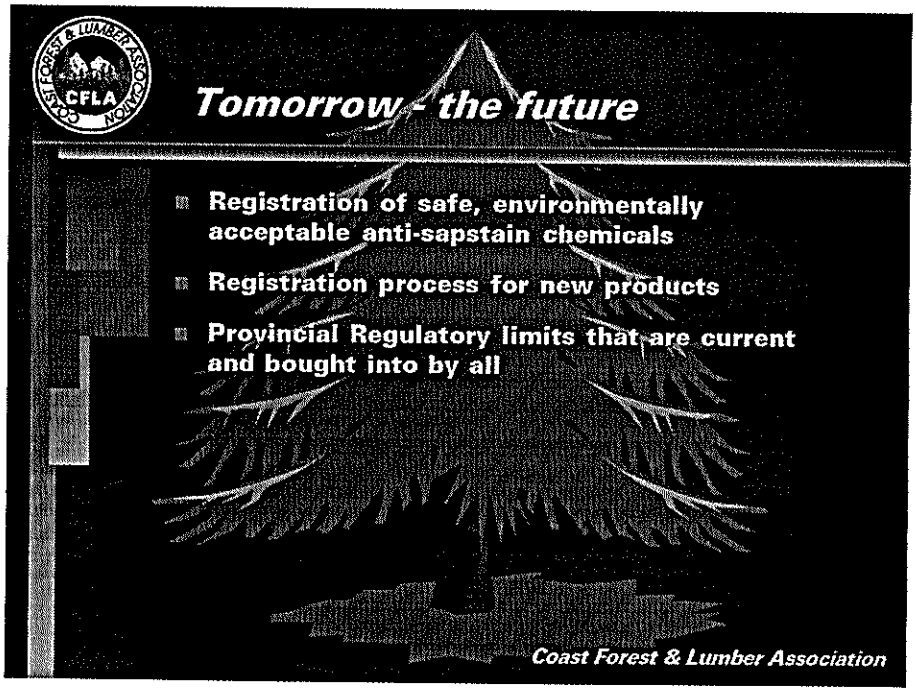
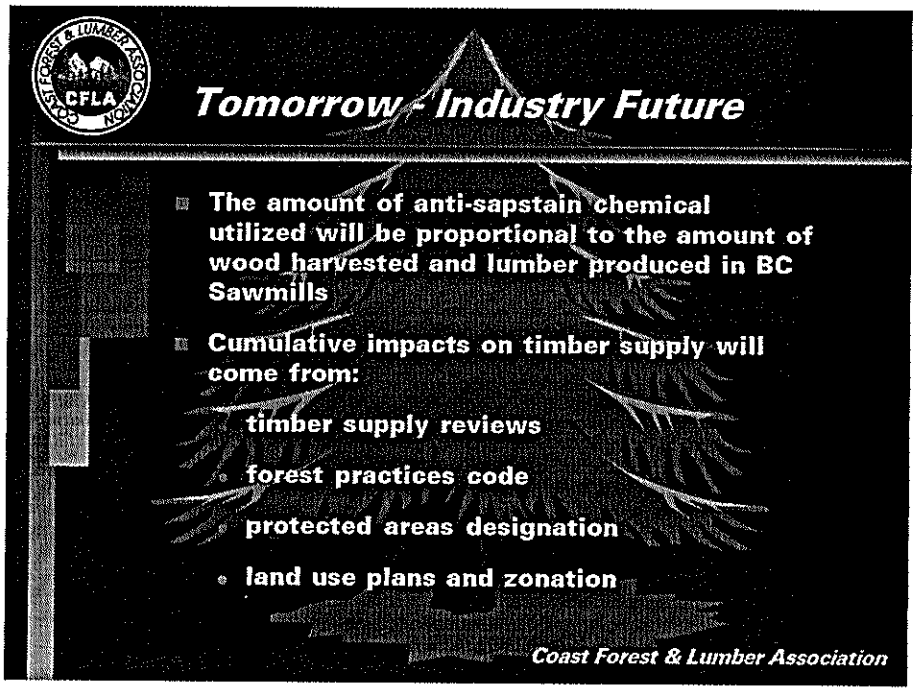

Tomorrow - the future
Registration of safe, environmentally acceptable anti-sapstain chemicals
Registration process for new products
Provincial Regulatory limits that are current and bought into by all
Coast Forest & Lumber Association


Tomorrow - Industry Future
The amount of anti-sapstain chemical utilized will be proportional to the amount of wood harvested and lumber produced in BC Sawmills
Cumulative impacts on timber supply will come from:
timber supply reviews
forest practices code
protected areas designation
land use plans and zonation
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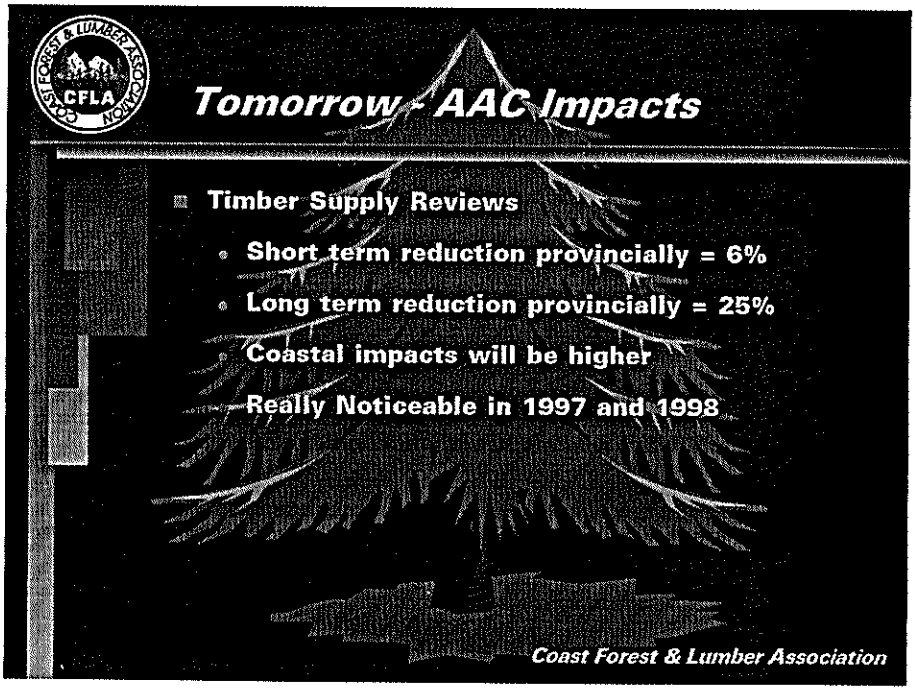
Tomorrow - AAC Impacts
Timber Supply Reviews
Short term reduction provincially = 6%
Long term reduction provincially = 25%
Coastal impacts will be higher
Really Noticeable in 1997 and 1998
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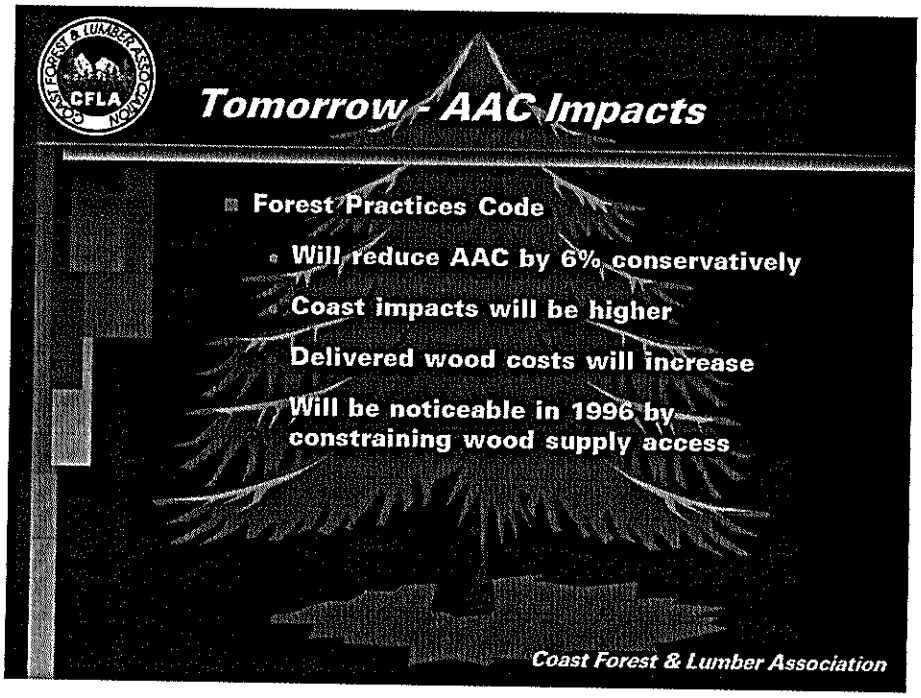
CFLA
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Tomorrow - AAC Impacts
Forest Practices Code
Will reduce AAC by 6% conservatively
Coast impacts will be higher
Delivered wood costs will increase
Will be noticeable in 1996 by constraining wood supply access
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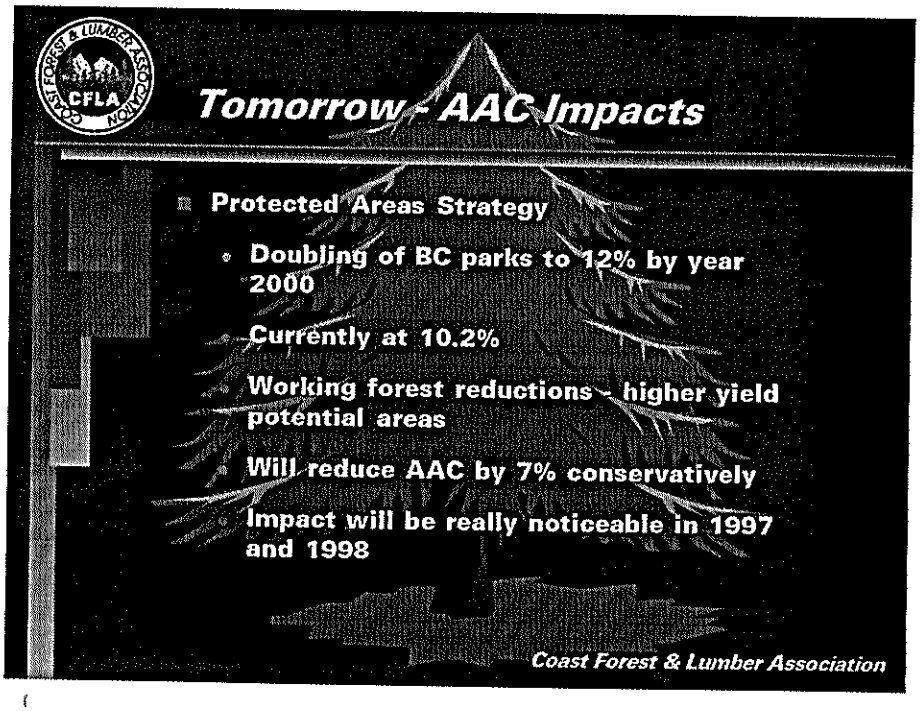
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Tomorrow - AAC Impacts
Protected Areas Strategy
Doubling of BC parks to 12% by year 2000
Currently at 10.2%
Working forest reductions - higher yield potential areas
Will reduce AAC by 7% conservatively
Impact will be really noticeable in 1997 and 1998
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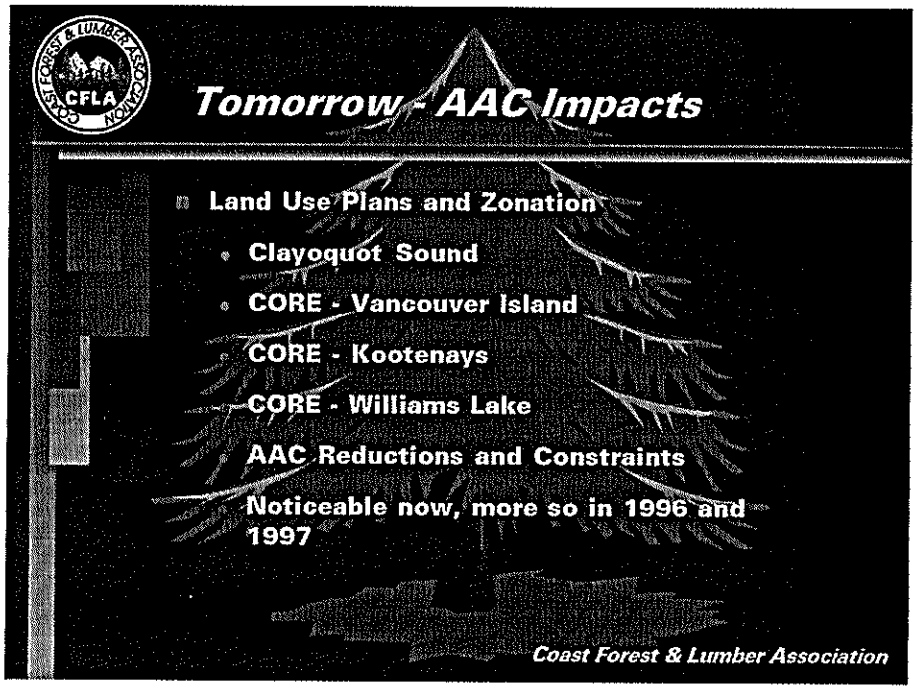
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Tomorrow - AAC Impacts
Land Use Plans and Zonation
Clayoquot Sound
CORE - Vancouver Island
CORE - Kootenays
CORE - Williams Lake
AAC Reductions and Constraints
Noticeable now, more so in 1996 and 1997
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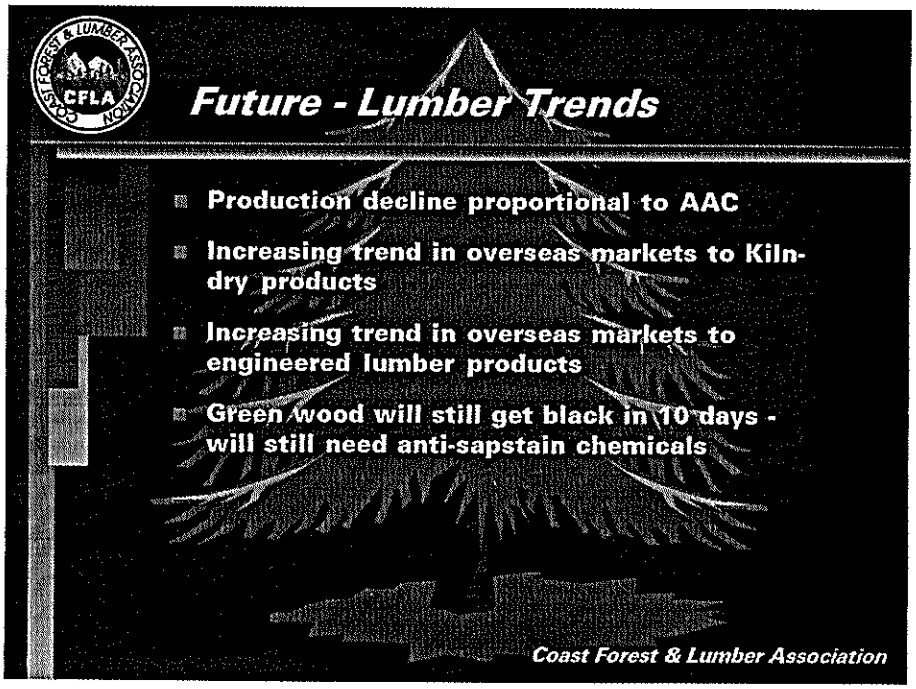
CFLA
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Future - Lumber Trends
Production decline proportional to AAC
Increasing trend in overseas markets to Kiln-dry products
Increasing trend in overseas markets to engineered lumber products
Green wood will still get black in 10 days - will still need anti-sapstain chemicals
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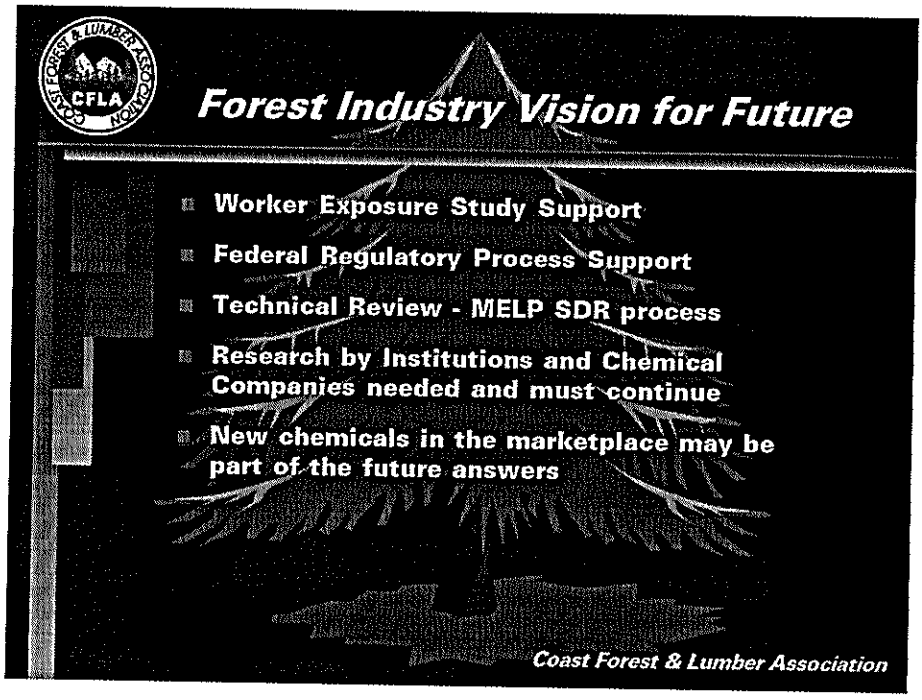
CFLA
COAST FOREST & LUMBER ASSOCIATION
Forest Industry Vision for Future
Worker Exposure Study Support
Federal Regulatory Process Support
Technical Review - MELP SDR process
Research by Institutions and Chemical Companies needed and must continue
New chemicals in the marketplace may be part of the future answers
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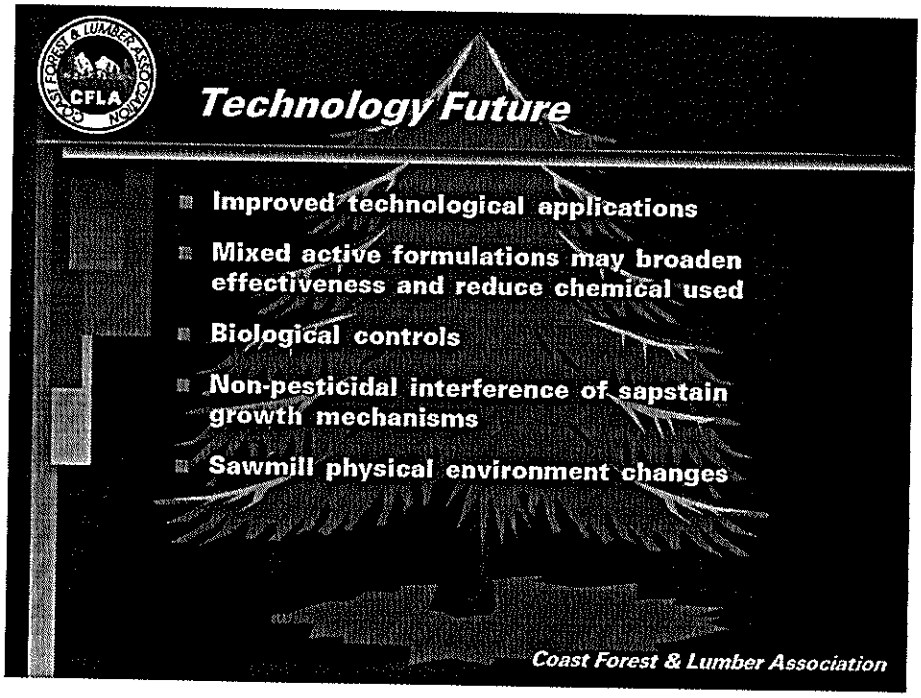
CFLA
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Technology Future
Improved technological applications
Mixed active formulations may broaden effectiveness and reduce chemical used
Biological controls
Non-pesticidal interference of sapstain growth mechanisms
Sawmill physical environment changes
Coast Forest & Lumber Association