

	Policy 1908-1947	Economic 1908-1953	Institutional 1908-1944
Organization [α]	<p><b>Drivers</b> Creation of Tongass (1908)</p> <p>Roosevelt and Pinchot expand Tongass by 8.7 million acres</p> <p>Regional Forester Heintzlemann lobbies U.S. Congress for Alaska Spruce Log Program</p> <p>Sustained Yield Forest Management Act (1944)</p>	<p>Creation of Tongass (1908)</p> <p>Endogenous constraints for industrial development</p> <p>World War II creates demand</p> <p>Alaska Spruce Log Program establishes first export markets for Tongass; demonstrates value of low-grade Tongass timber</p>	<p>Creation of Tongass (1908)</p> <p>USFS inspections first suggest industrial pulp production</p> <p><i>Ecology</i> (Taylor 1935) article justifies clear-cutting</p> <p>Alaska Spruce Log Program used to shift from high-grading to even-aged management</p>
	<p><b>Dynamics</b> <i>Efforts to develop Tongass-specific policy instruments constrained by economic factors</i></p>	<p><i>Both endogenous and exogenous factors constrain industrial forestry until WWII</i></p>	<p><i>Efforts to implement even-aged management constrained by economic factors</i></p>
	1947-1969	1953-1979	1944-1975
Growth [r]	<p><b>Drivers</b> Tongass Timber Act (1947) creates long-term leases, subsidies for leaseholders</p> <p>Heintzlemann appointed Governor of Alaska</p> <p>Alaska Statehood Act MUSYA Administrative Procedures Act</p>	<p>KPC pulp mill opens in Ketchikan (1953)</p> <p>APC contract signed, mill opens in Sitka (1959)</p> <p>Volume harvested from Tongass peaks in 1970</p>	<p>Sustained Yield Forest Management Act (1944)</p> <p>MUSYA formalizes multiple-use philosophy, complicates planning</p> <p>APA increases transparency of agency decision-making</p>
	<p><b>Dynamics</b> <i>Tongass policy monopoly forms, mobilizes resources (e.g., long-term leases and subsidies) for industrial forestry in Alaska</i></p>	<p><i>Rapid growth in processing capacity, employment, timber outputs and local economies in Sitka, Ketchikan and Wrangell</i></p>	<p><i>Tongass implements even-aged approach with clear-cutting; policies begin to reform agency planning and decision-making</i></p>

	Policy 1969-1990	Economic 1985-1994	Institutional 1975-1990
Conservation [K]	<p><b>Drivers</b> NEPA (1969) requires environmental impact studies and provides basis for appeals</p> <p>ANILCA (1980) reserves ~1/3 Tongass timber base; assures production from remaining lands</p> <p><i>Reid Bros. vs. KPC</i> finds leaseholders guilty of collusion</p>	<p>Export markets decline significantly for first time (1985)</p> <p>Market volatility and other uncertainties constrain local investment in mill technology</p>	<p><i>Zieske v. Butz</i> decision enjoins harvesting under KPC contract</p> <p>NFMA (1976) allows KPC logging to resume; requires comprehensive forest planning</p> <p>NEPA and ESA dramatically increase planning costs, and prompt increasing litigation</p>
	<p><b>Dynamics</b> <i>Policy monopoly stabilizes system from Tongass-specific actions (ANILCA), and market perturbations, but becomes weakened by national reforms</i></p>	<p><i>Market downturns, increasing competition and low efficiency reduce export profit margins; all local mills experience closures, except APC and KPC pulp mills</i></p>	<p><i>Increasing complexity of planning process, appeals, and litigation create major challenges, but Tongass managers maintain timber supply to leaseholders</i></p>
Collapse – Reorganization [Ω-α]	<p>1990-2008</p> <p><b>Drivers</b> TTRA (1990) dismantles policy monopoly; rebukes timber priority of Tongass management</p> <p>“Tongass Disaster Relief Funds” appropriated by Sen. Stevens</p> <p>‘Roadless rule’ nullified by GW Bush Administration</p>	<p>1994-2008</p> <p>Export markets decline for a second time (~1992)</p> <p>Leaseholders close pulp mills (APC in 1994; KPC in 1997); lease contracts terminated</p> <p>Market conditions improve for Tongass exports (~2000)</p>	<p>1990-2008</p> <p>TTRA (1990) specifically orders Tongass managers to reduce emphasis on timber; ongoing planning efforts shift direction</p> <p>1997 TLMP includes ecosystem management and conservation principles, reduces Tongass timber base, allowable harvest</p>
	<p><b>Dynamics</b> <i>Policy monopoly loses control; environmental groups influence decision-making through several venues; while “old” monopoly actors maintain budget influence</i></p>	<p><i>Closure of major pulp and saw mills; industry loses all low-grade timber processing capacity; ~3500 jobs lost; local industry operates below capacity</i></p>	<p><i>Tongass managers face constant litigation and appeals; most timber offered is never sold or harvested; emergence of ‘microsale’ program</i></p>