Biodiversity Conservation in the Context of Tropical Forest Management

Francis E. Putz
Kent H. Redford
John G. Robinson
Robert Fimbel
Geoffrey M. Blate

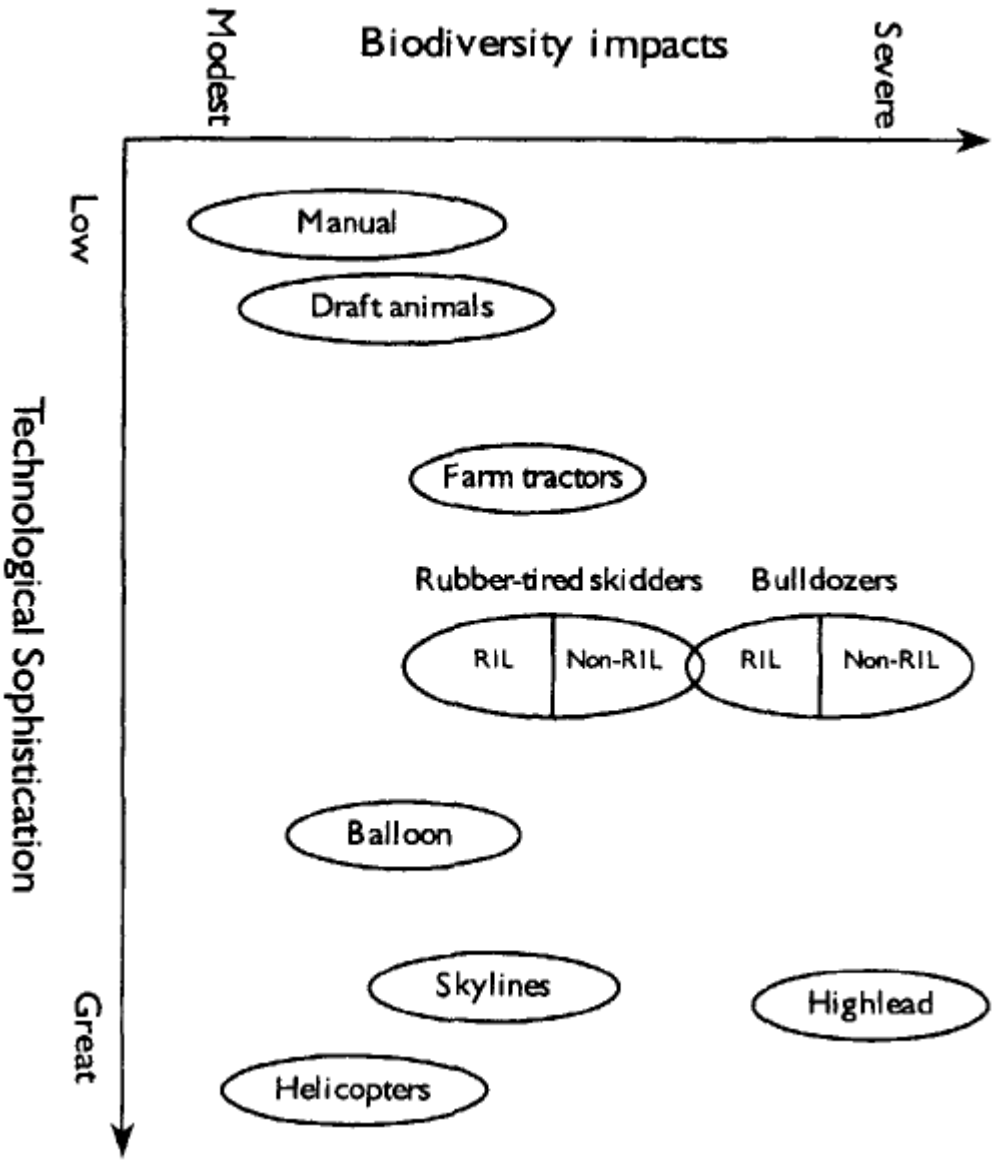

Biodiversity impacts
Modest
Severe
Low
Technological Sophistication
Great
Manual
Draft animals
Farm tractors
Rubber-tired skidders
Bulldozers
RIL
Non-RIL
RIL
Non-RIL
Balloon
Skylines
Highlead
Helicopters

Figure 1 Logging intensities (m^3/ha) for tropical forests. In most of these studies, as in most logging areas in the tropics, felling was with chainsaws and yarding with bulldozers or articulated skidders with rubber tires.

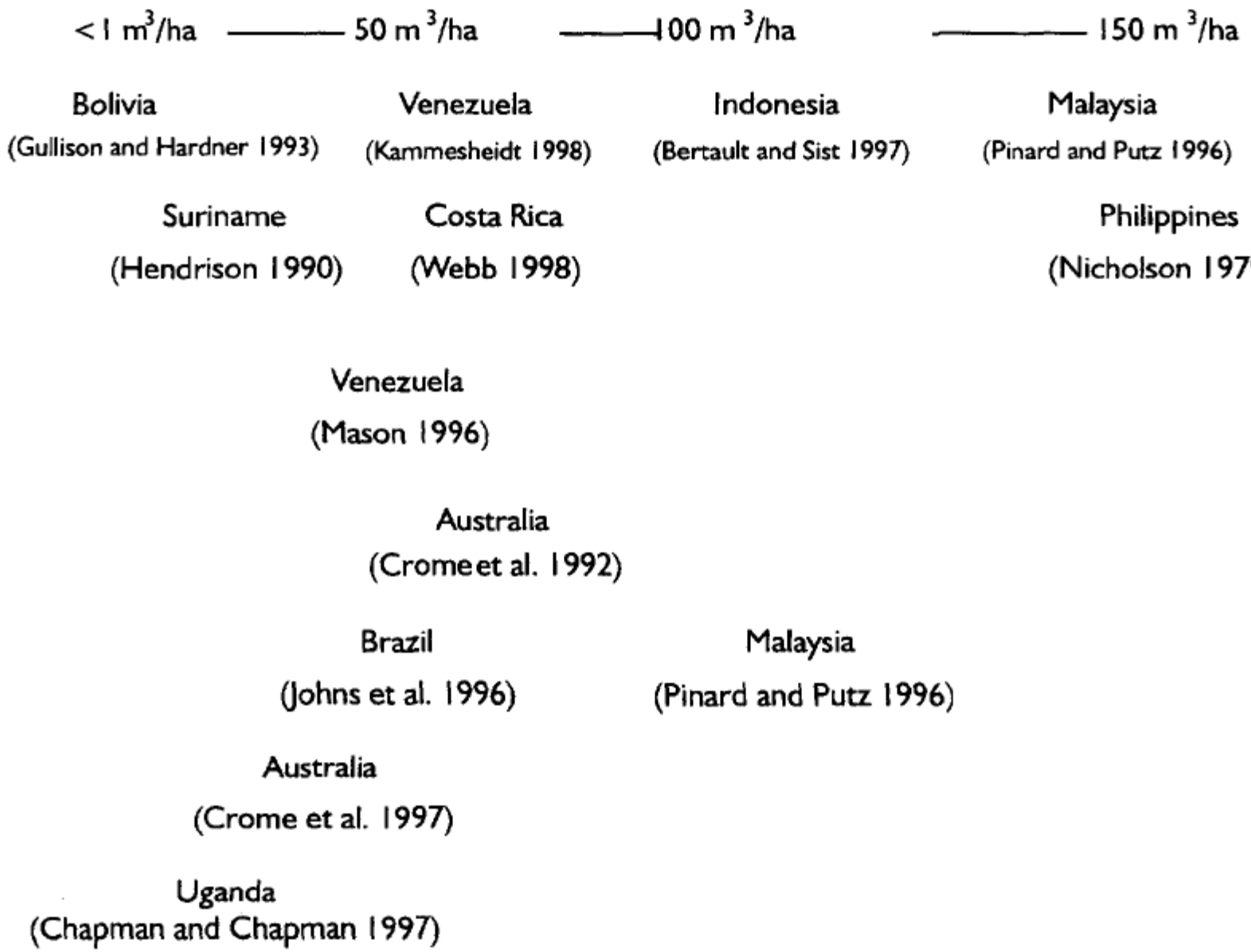
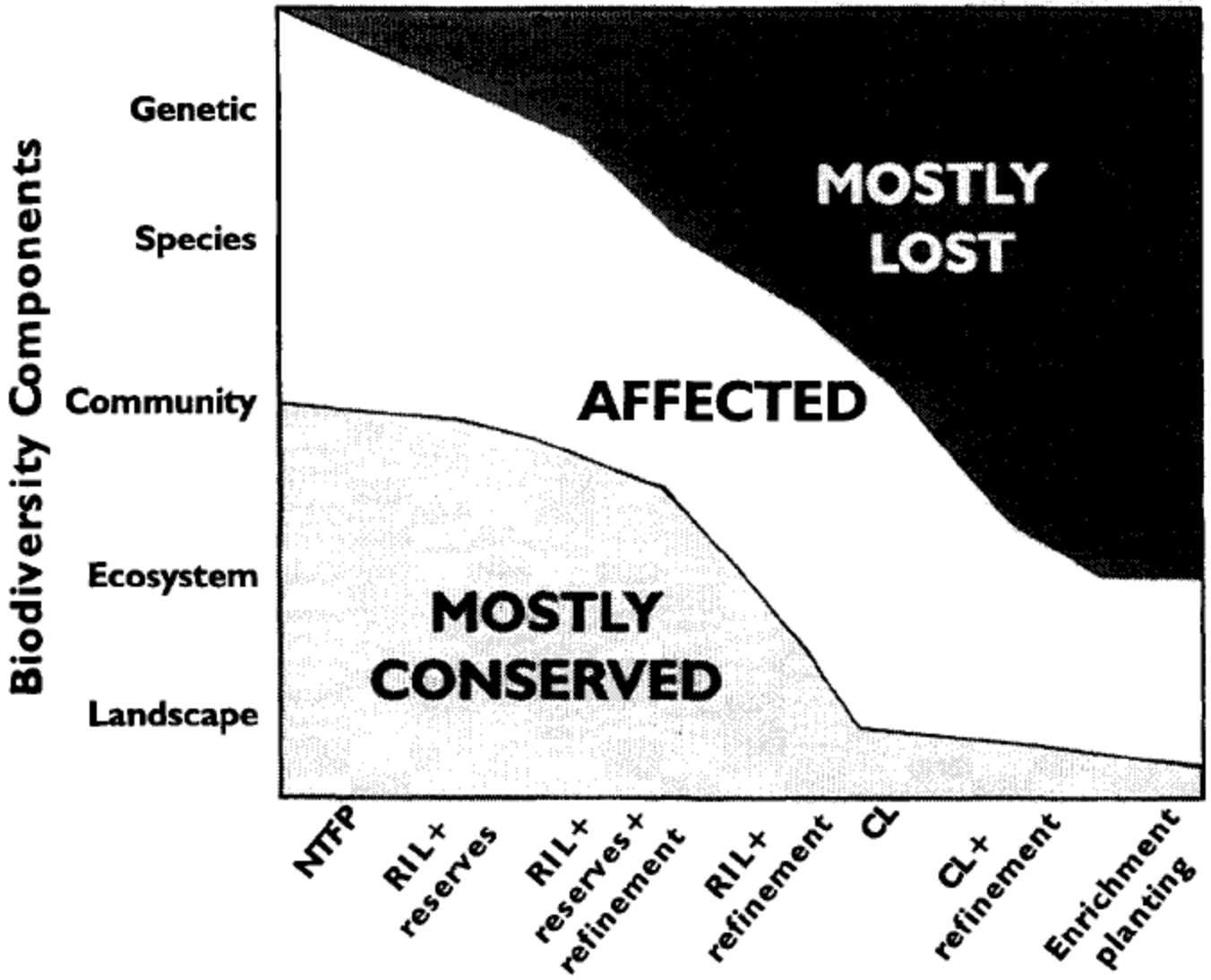


Figure 4 Expected effects of a range of forest uses on the components of biodiversity



Legend:
NTFP = Non-timber forest products

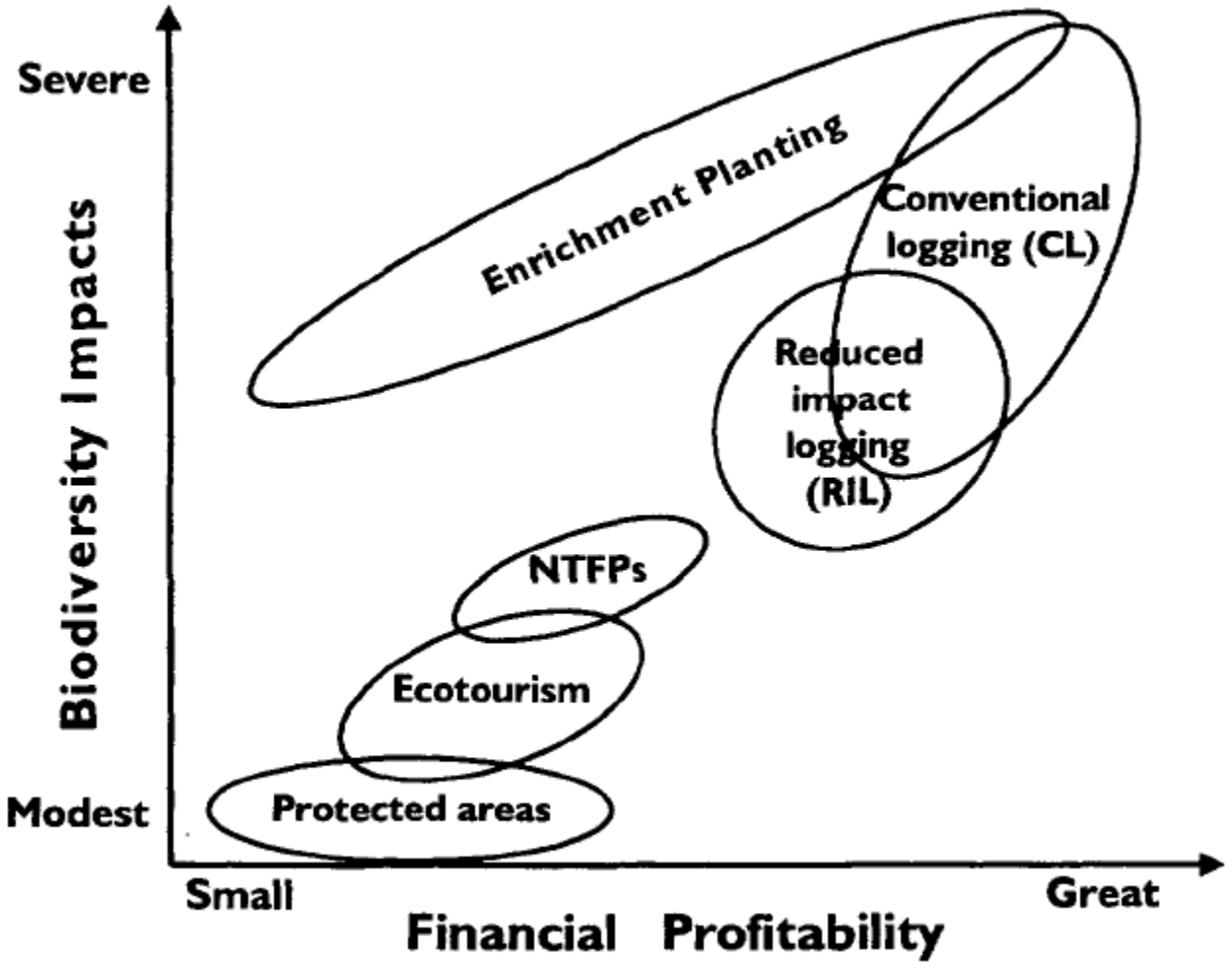
RIL = Reduced-impact logging

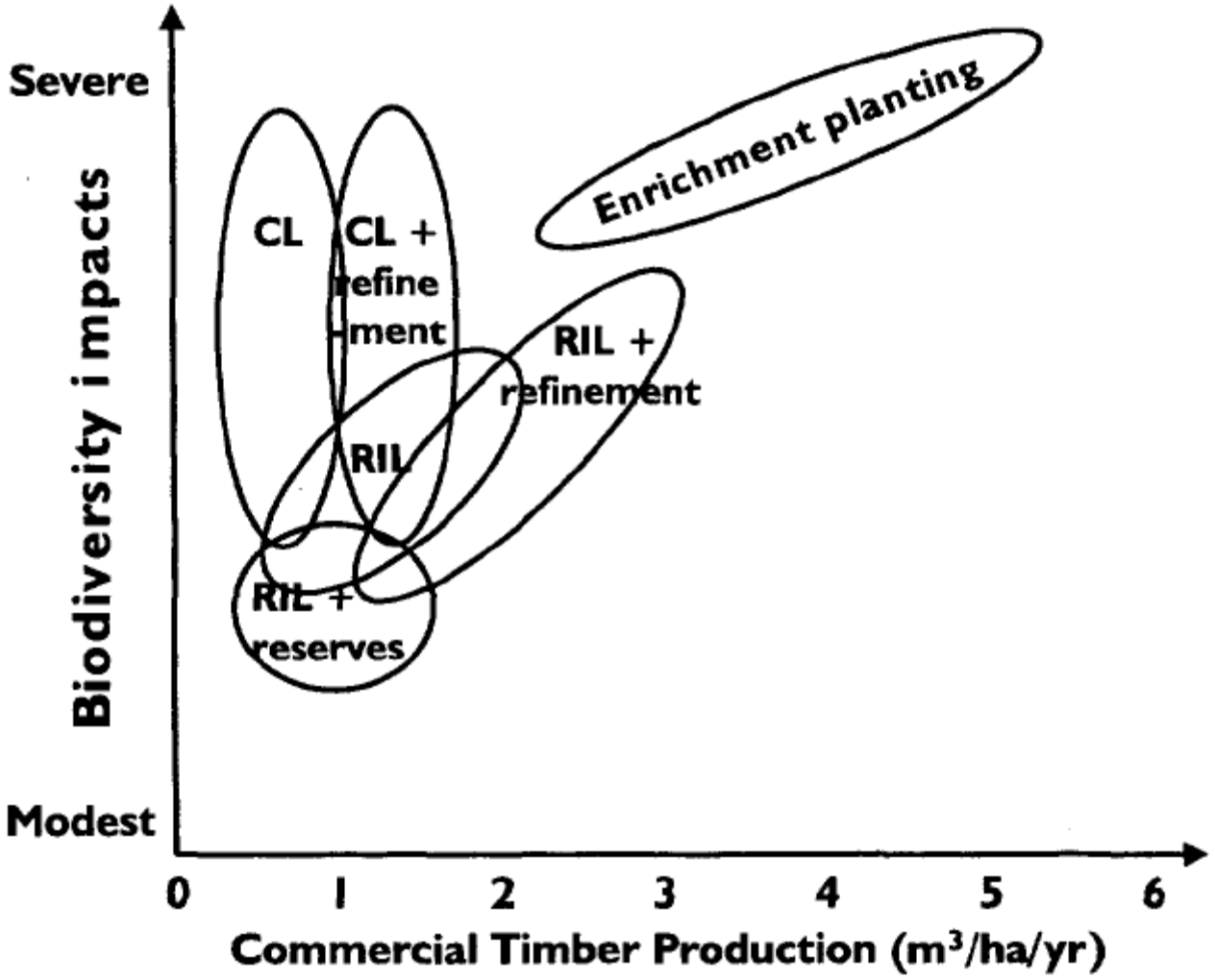
Reserves = Protected areas within logged units

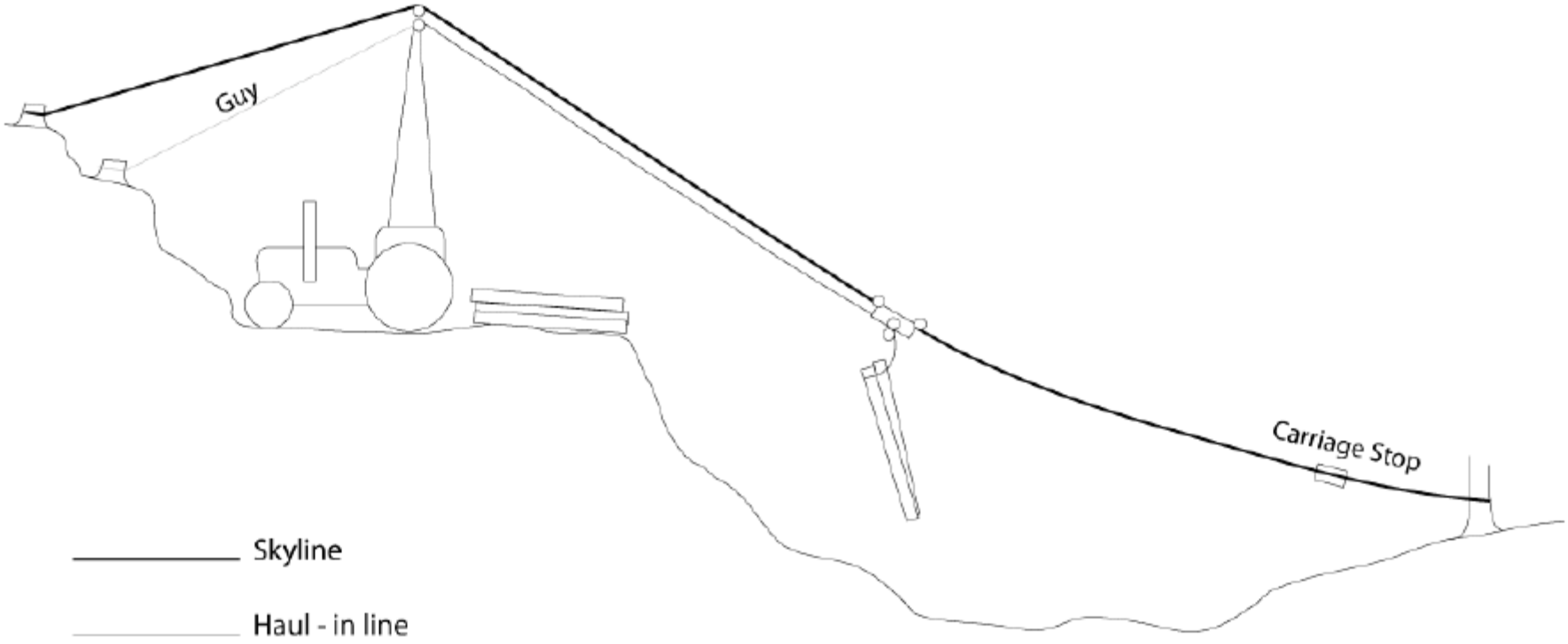
Refinement = Silvicultural treatments such as liberation of future crop trees from competition, which can substantially change the physiognomy, composition, and trophic structure of forest stands which are applied to increase volume increments and relative densities of commercial timber species

Enrichment planting = Increasing the stocking of commercial species by planting seedlings (or seeds) in logging gaps or along cleared lines

CL = Conventional logging


Severe
Biodiversity Impacts
Modest
Enrichment Planting
Conventional logging (CL)
Reduced impact logging (RIL)
NTFPs
Ecotourism
Protected areas
Small
Great
Financial Profitability


Severe
Biodiversity impacts
Modest
CL
CL + refine ment
Enrichment planting
RIL + refinement
RIL
RIL + reserves
0
1
2
3
4
5
6
Commercial Timber Production (m³/ha/yr)


Guy
Carriage Stop
Skyline
Haul - in line