Sustaining Tropical Forests with Forestry

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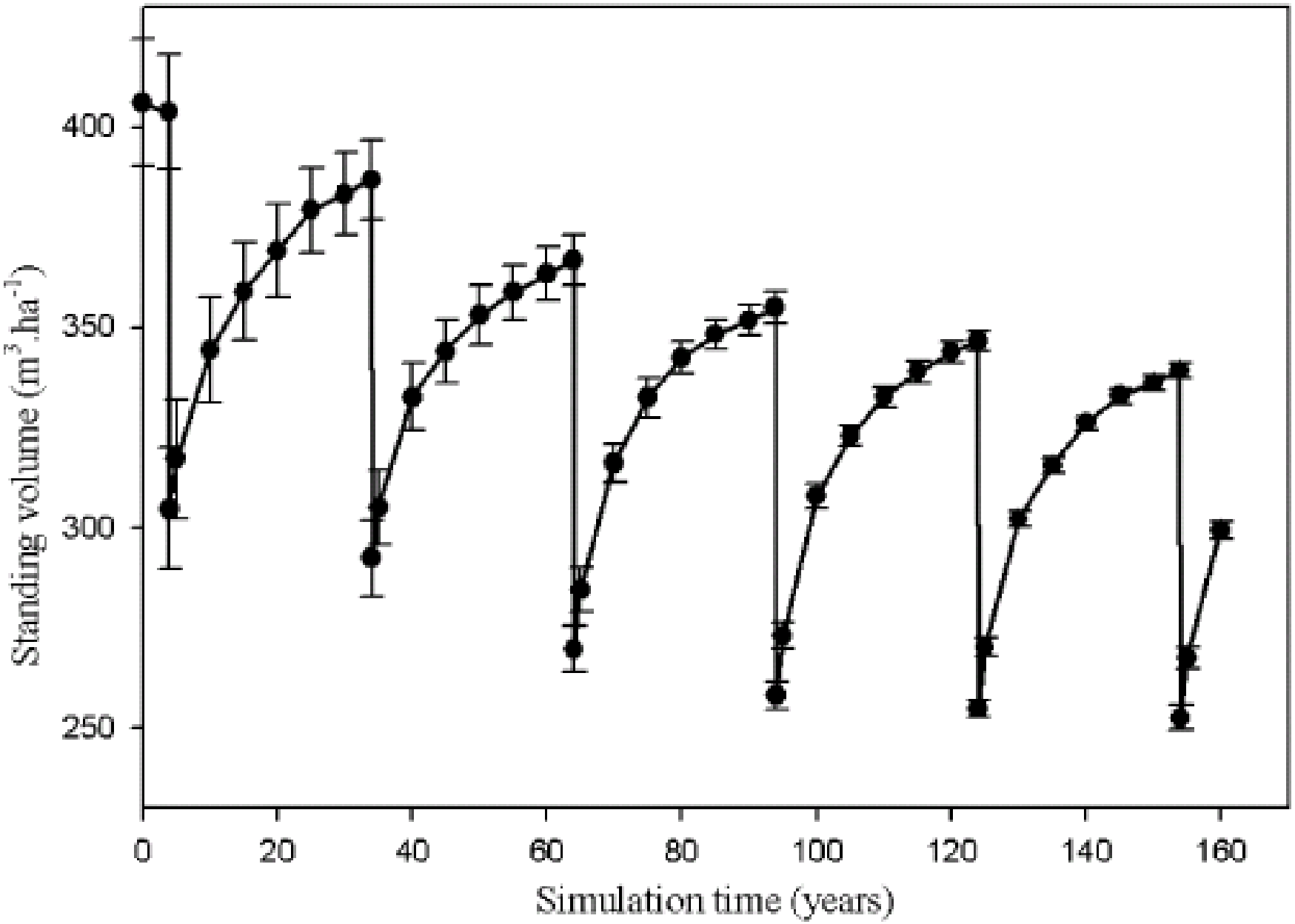
SUSTAINABILITY

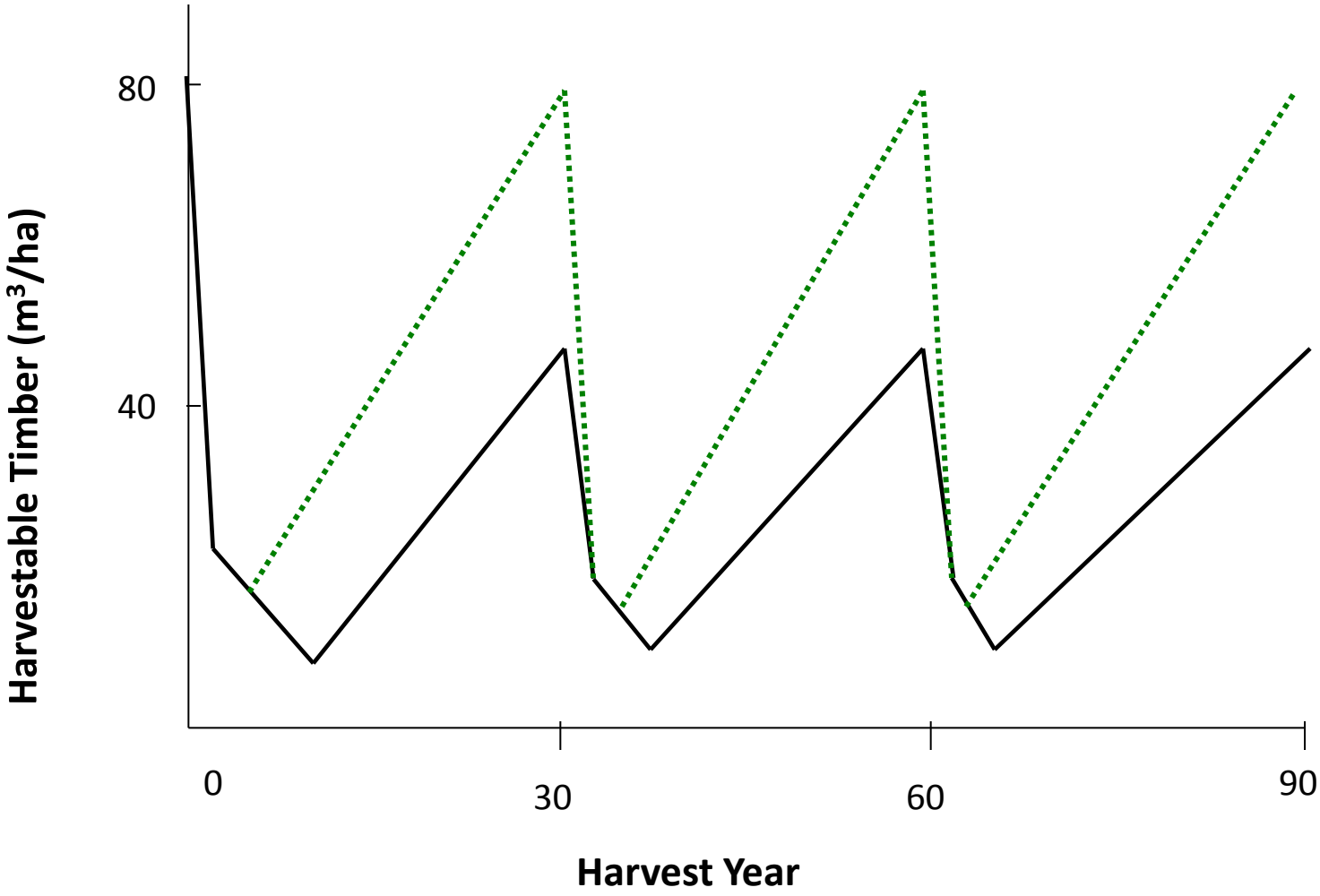
Longer Cutting Cycles | Silvicultural Treatments | Lower Intensity

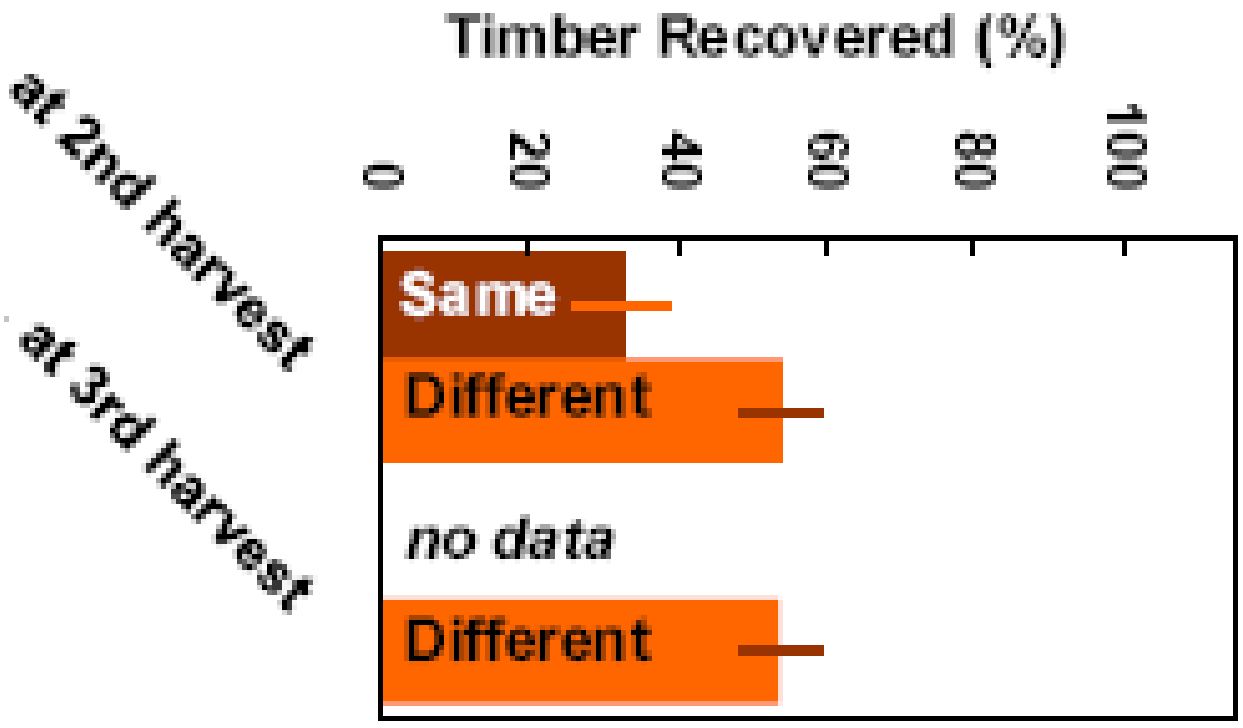
FLEGT | FSC | REDD+ | Community

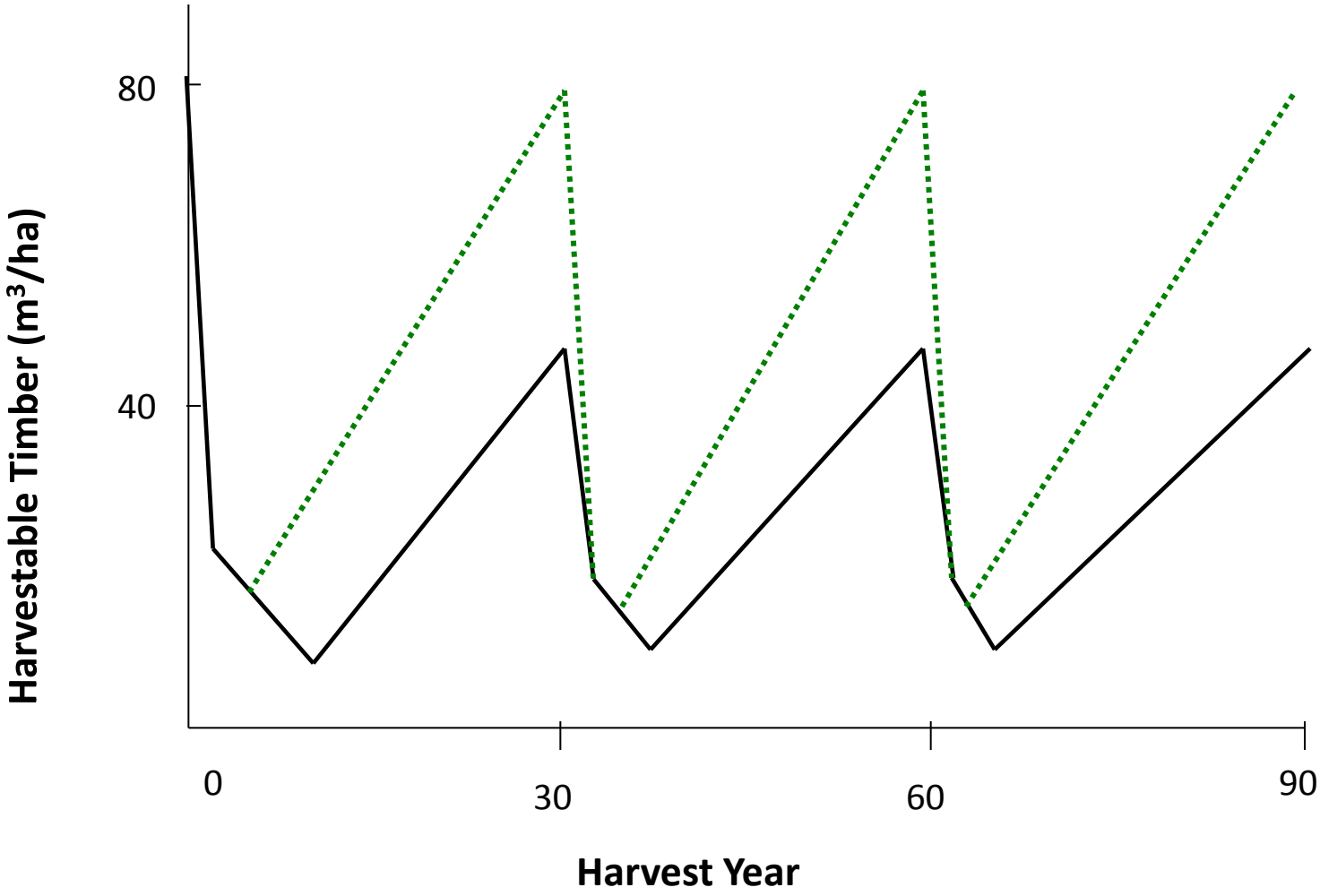
Lacey Act | Certification | VCS | Control

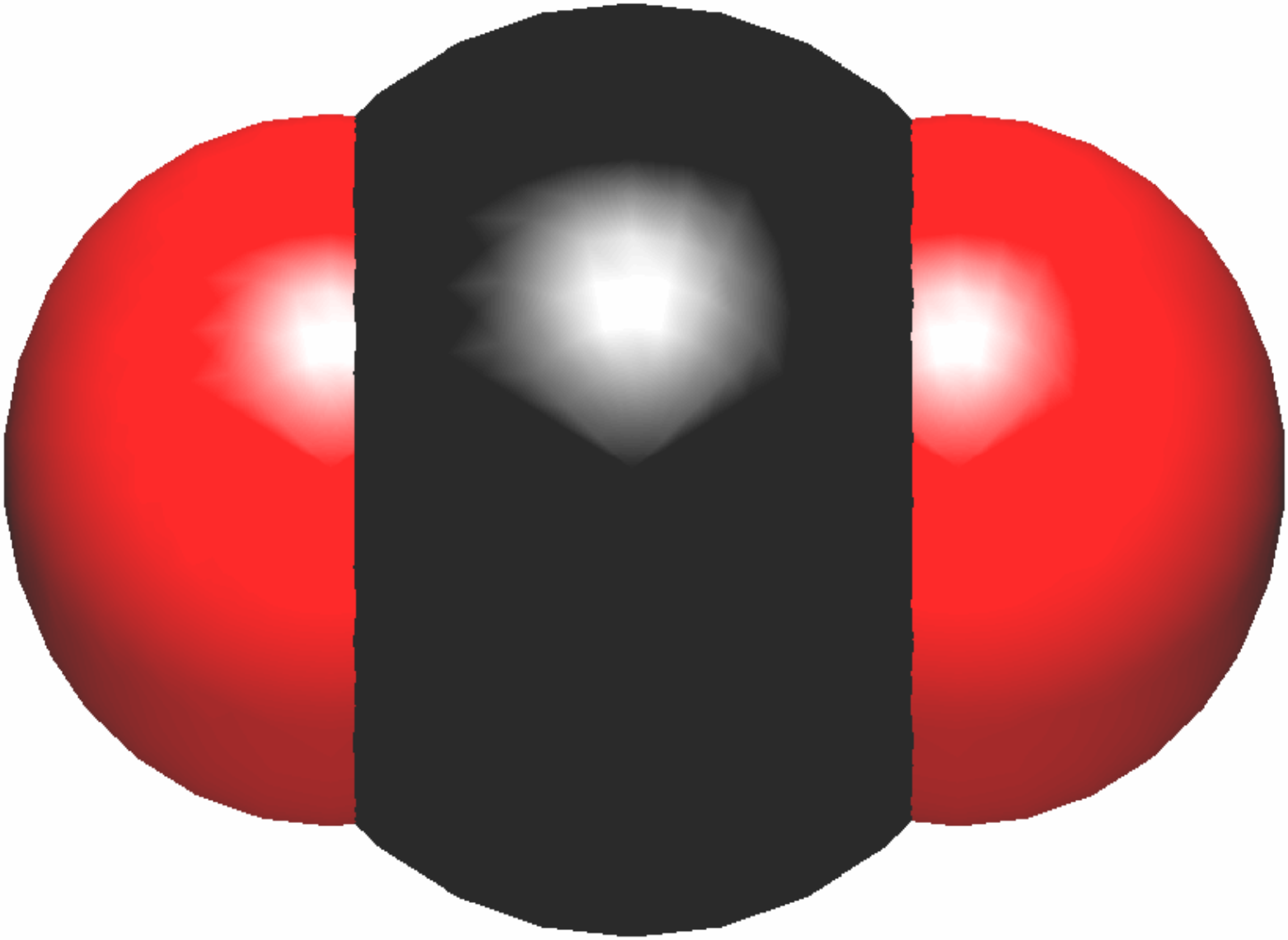
REDUCED-IMPACT LOGGING


Standing volume (m3.ha-1)
400
350
300
250
0
20
40
60
80
100
120
140
160
Simulation time (years)


80
40
Harvestable Timber (m³/ha)
0
30
60
90
Harvest Year

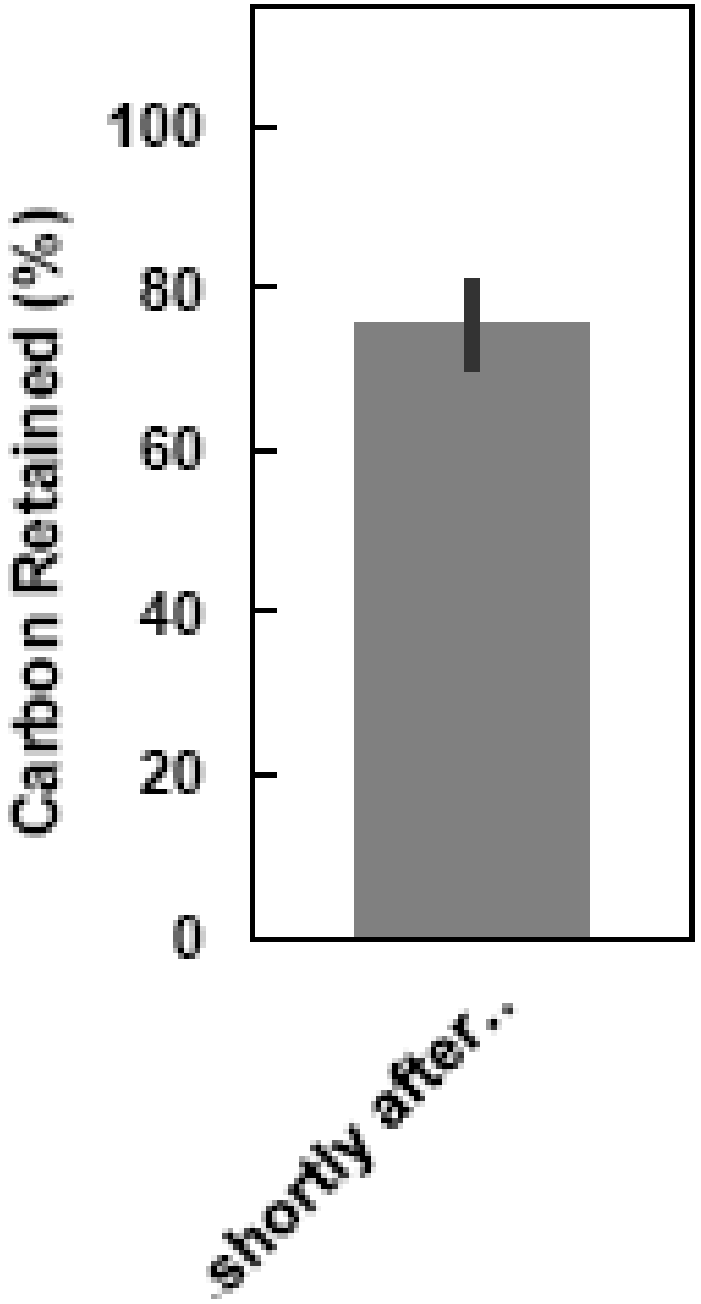

Timber Recovered (%)
0
20
40
60
80
100
at 2nd harvest
at 3rd harvest
Same
Different
no data
Different


80
40
Harvestable Timber (m³/ha)
0
30
60
90
Harvest Year

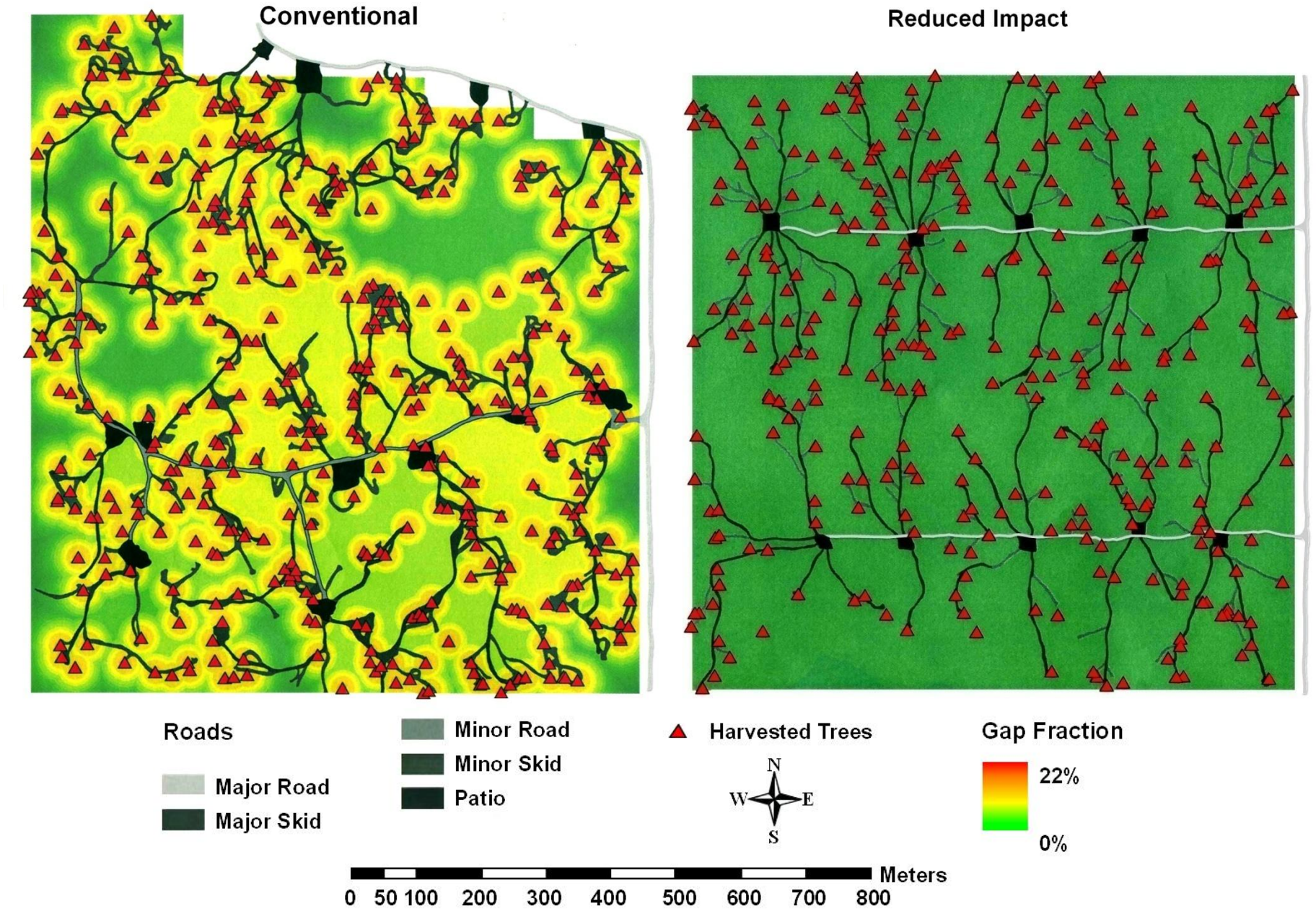


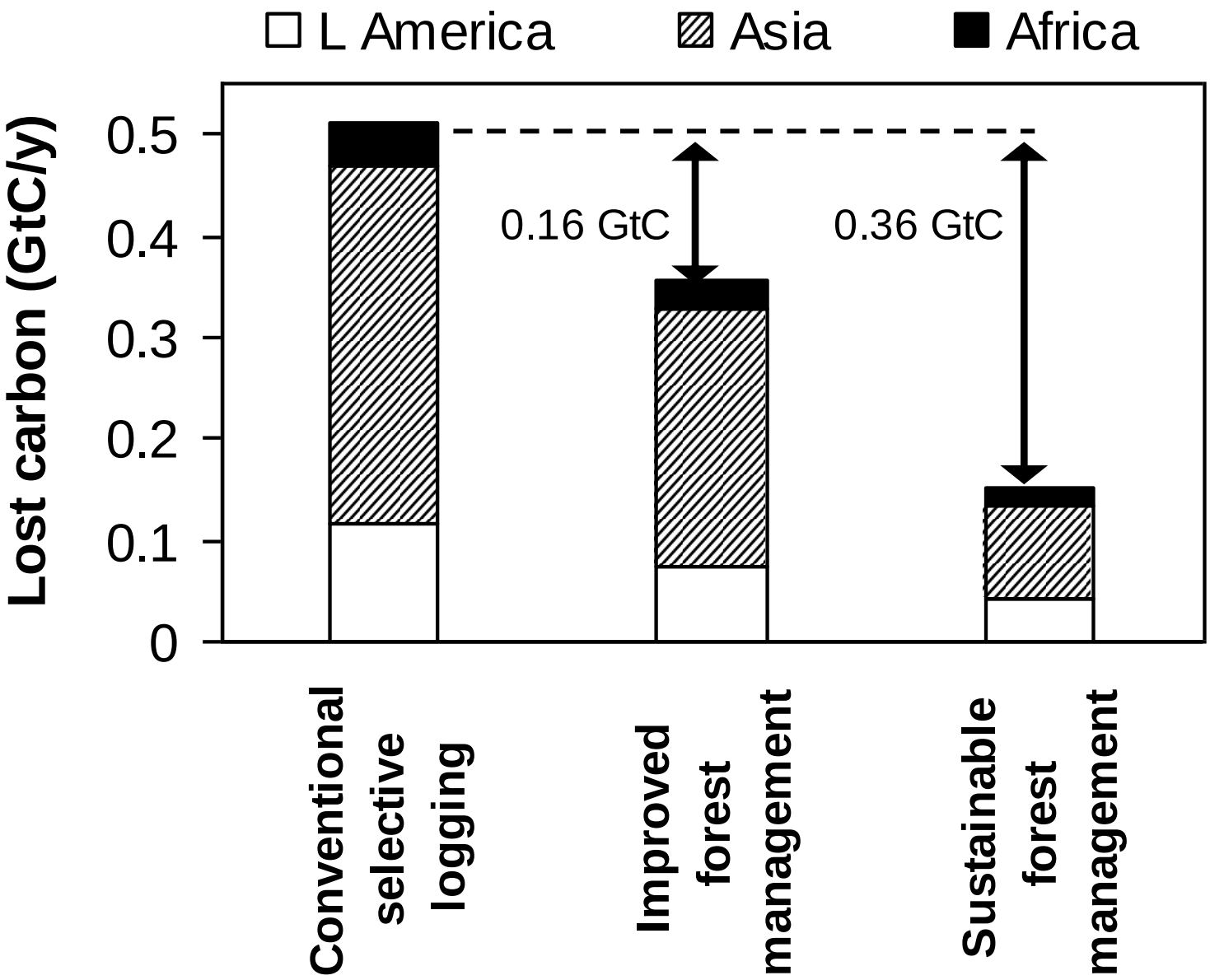
A Molecule of Carbon Dioxide

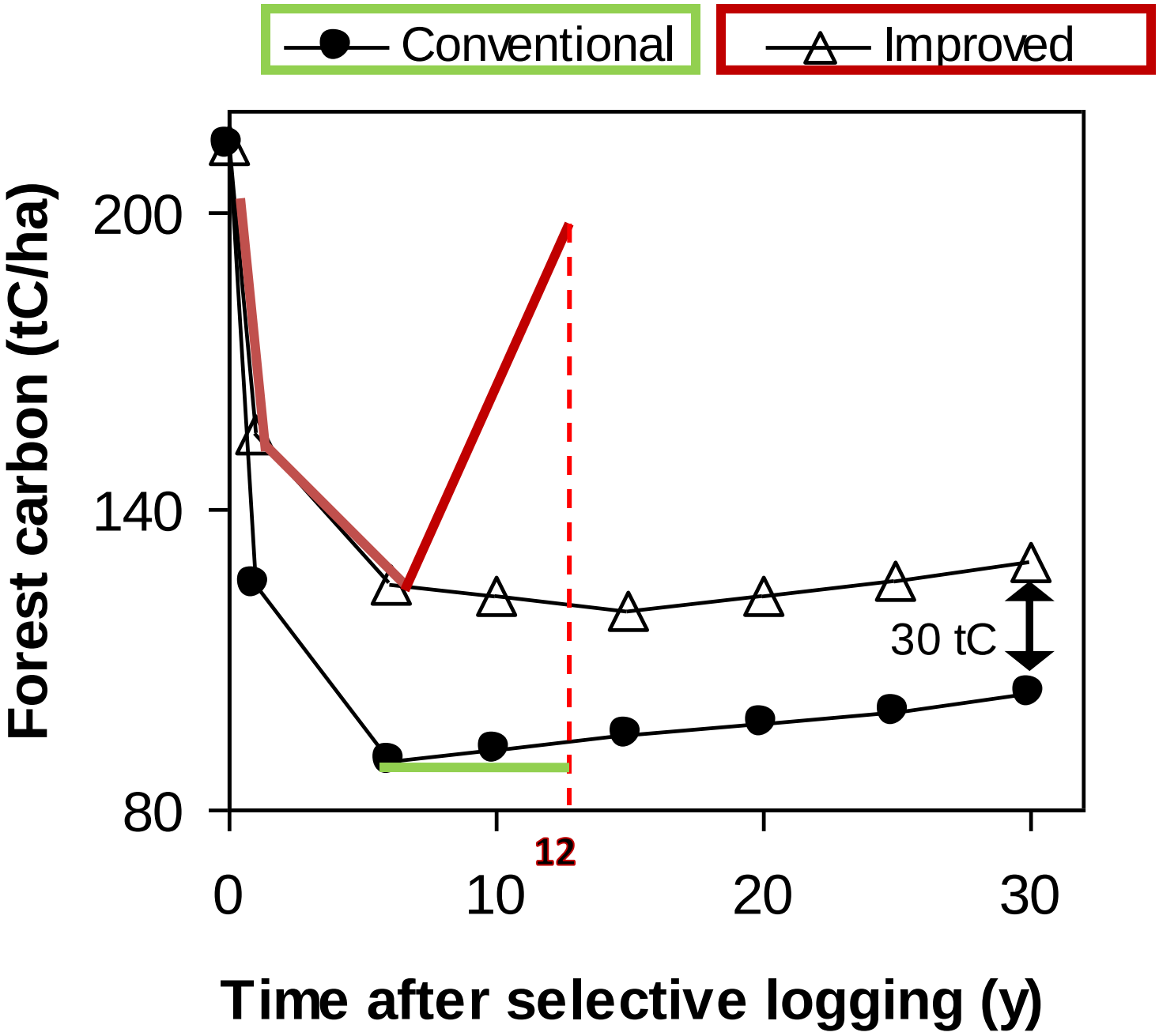

Reducing
Emissions from
Deforestation & Forest
Degradation
REDD

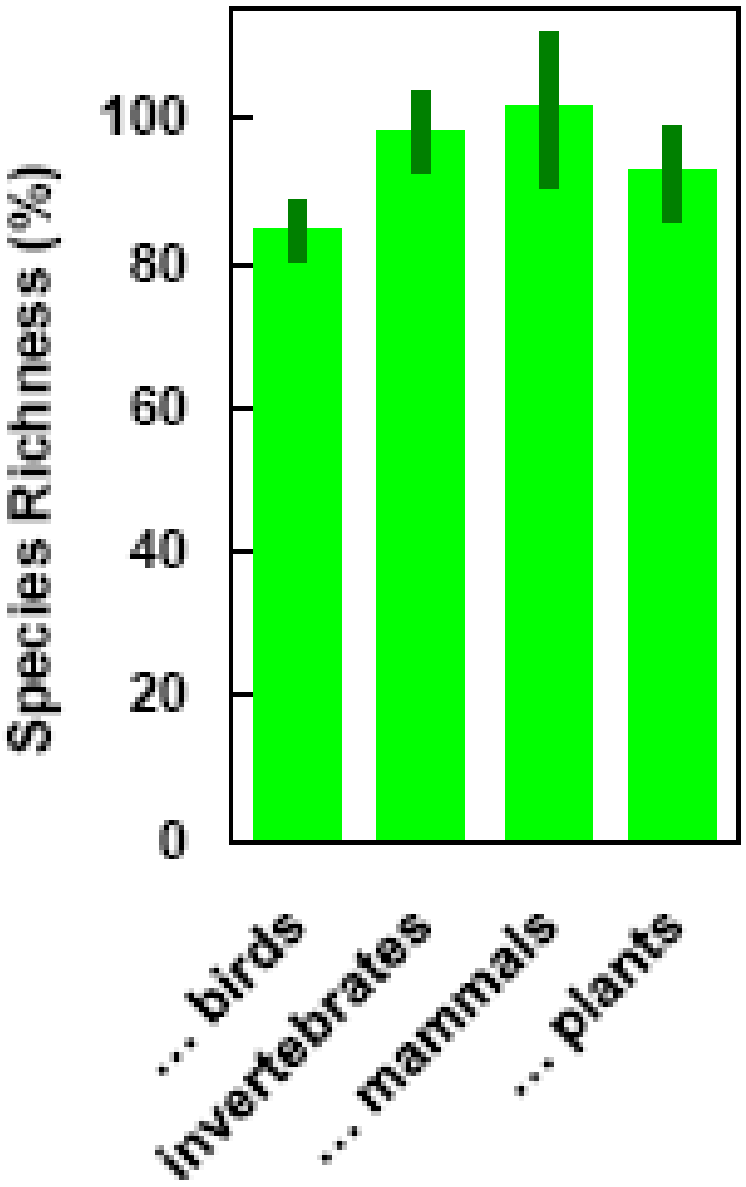

Carbon Retained (%)
100
80
60
40
20
0
shortly after...

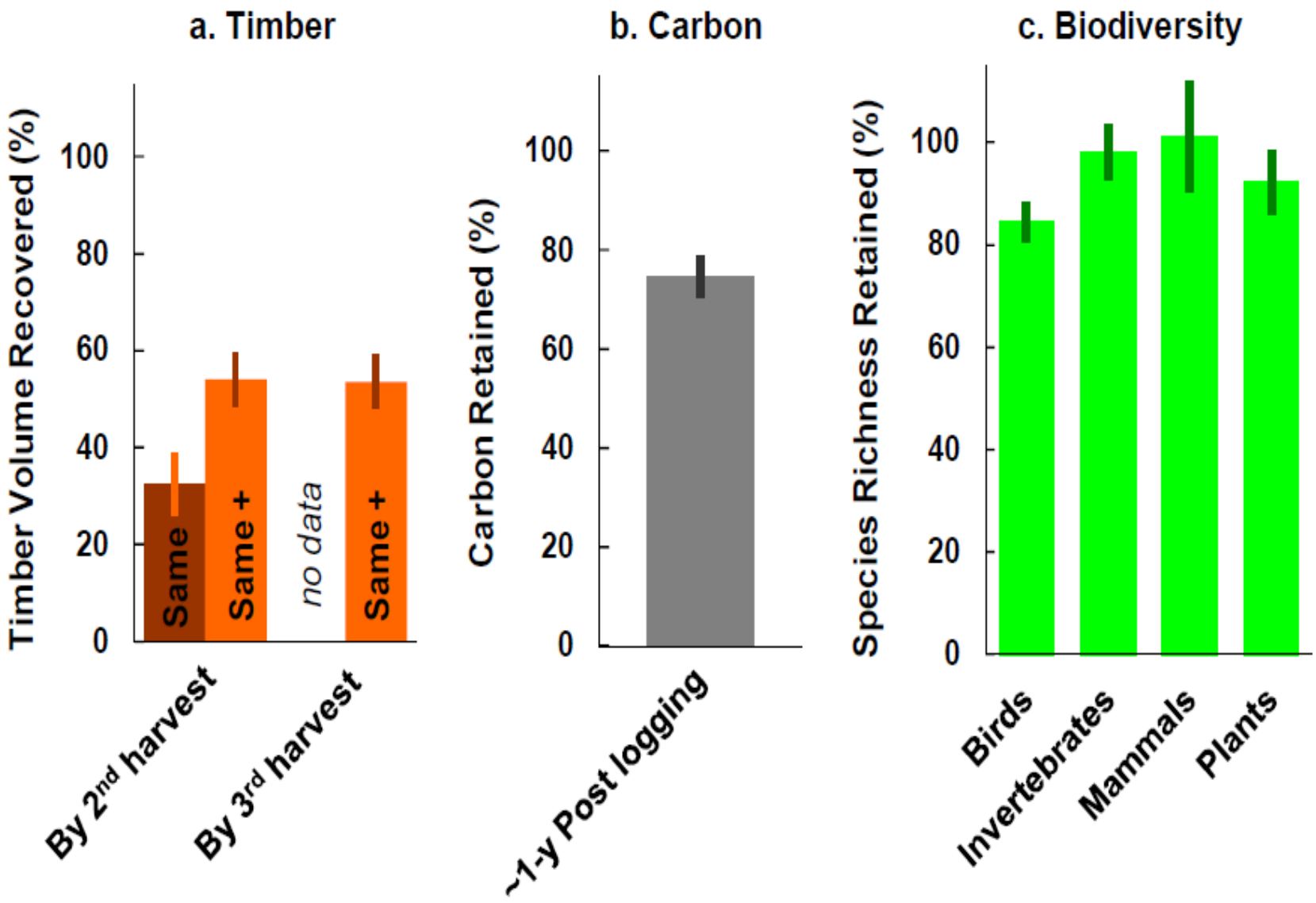
1996 Logging Plots




L America
Asia
Africa
Lost carbon (GtC/y)
0.5
0.4
0.3
0.2
0.1
0
0.16 GtC
0.36 GtC
Conventional selective logging
Improved forest management
Sustainable forest management


Conventional
Improved
Forest carbon (tC/ha)
200
140
80
0
10
12
20
30
30 tC
Time after selective logging (y)


Species Richness (%)
0
20
40
60
80
100
... birds
invertebrates
... mammals
... plants


a. Timber
Timber Volume Recovered (%)
100
80
60
40
20
0
Same
Same +
no data
Same +
By 2nd harvest
By 3rd harvest
b. Carbon
Carbon Retained (%)
100
80
60
40
20
0
~1-y Post logging
c. Biodiversity
Species Richness Retained (%)
100
80
60
40
20
0
Birds
Invertebrates
Mammals
Plants

MESSAGES

Selective logging of tropical forests isn't so bad in terms of:

1. **Sustained yields**
   (if accept a '*Primary Forest Premium'*).

2. **Carbon retention and recovery.**

3. **Biodiversity**
   (at least as species richness).

Synergistic Improvements (timber/carbon/biodiversity)

Lengthening Cutting Cycles

and/or

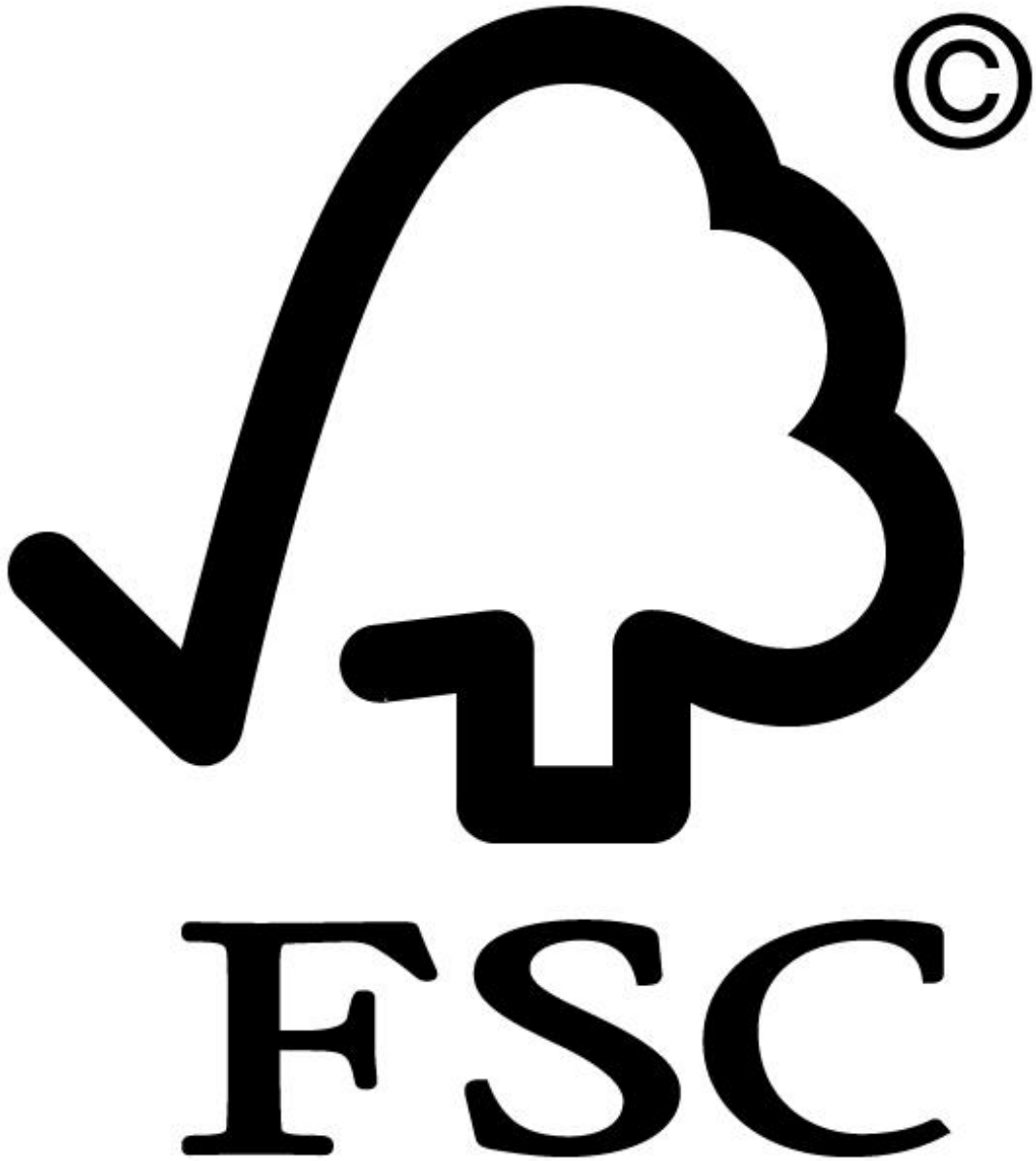
Reducing Harvest Intensity (m^3/ha)

while always

Employing Reduced-Impact Logging Practices

But why are these improvements more likely than ever before?

1. Emphasis on **Legality** (FLEGT & Lacey Act).
2. Forest Product **Certification**.
3. Forest **Carbon** Valuation through REDD+.
4. Increased **Community** Control.


FSC

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REDUCED IMPACT LOGGING