

Impacts and Costs of Forest Certification: A Survey of SFI and FSC in North America

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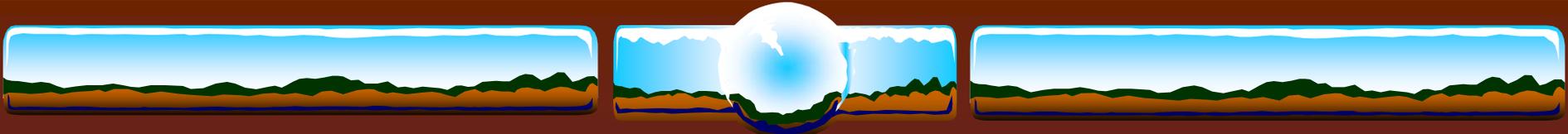
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Outline

- Forest certification extent
- NCSU 2007 North America surveys
 - SFI and FSC
 - Certification impacts
 - Certification costs
 - Satisfaction and retention
- Discussion and Conclusions



World Forest Certification Systems and Area, 2008 (million ha)

□ Forest Stewardship Council (FSC)	104
□ Programme Endorsement For Cert (PEFC)	202
➤ Sustainable Forestry Initiative (SFI)	61
➤ Canadian Standards Association (CSA)	76
➤ Europe	57
➤ Certificación Forestal (CertFor)	2
➤ Certificação Florestal (CerFlor)	1
➤ Australian Forestry Standard	8
➤ American Tree Farm System (ATFS)	12
□ Malaysian Timber Cert Council (MTCC)	5
Total	323

~8% of 3.9 billion ha of world forests; Note: ISO 14001 areas not included

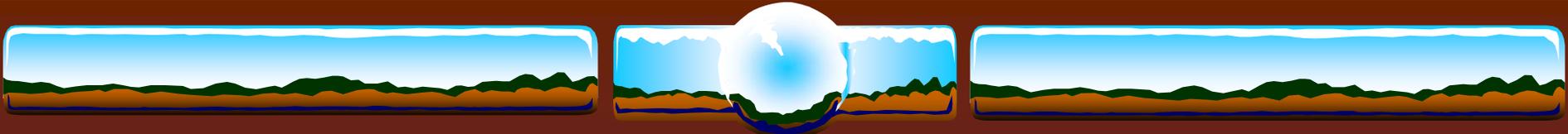
Sources: PEFC, FSC, MTCC web sites; ATFS – personal comm.



Certified Forests in the Americas, 2008 (000 ha)

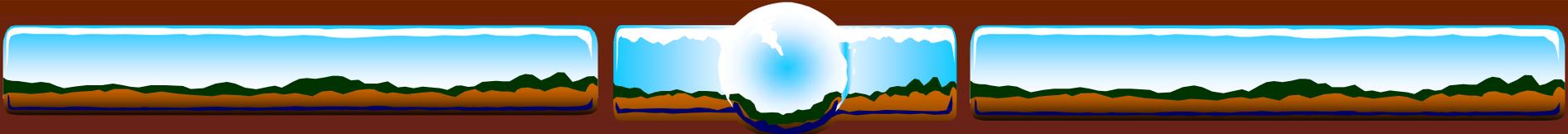
Country	Forest Area	FSC	SFI	ATFS, CSA, Cerflor, CertFor	Cert as % of Total
Canada	310 134	23 593	39 199	75 759	44.7
USA	303 089	9 976	22 158	12 100	14.6
Costa Rica	2 391	59	-	-	2.5
Guatemala	3 938	509	-	-	12.9
Brazil	477 698	6 184	-	890	1.5
Uruguay	1 506	407	-	-	27.0
Bolivia	58 740	1 727	-	-	2.9
Argentina	33 021	231	-	-	0.6
Chile	16 121	322	-	1 819	13.3
All Americas	3 856 488	45 110	61 358	90 568	5.1

197,036,000 ha in the Americas; Source: FSC, SFI, and PEFC Program Web Sites 2008



Forest Certification - SFI Objectives

- 1) Broaden implementation of sustainable forestry and sustainable harvest levels
- 2) Ensure long-term forest productivity & reforestation, protect from fire, disease, etc
- 3) Protect water quality in streams, lakes, and other water bodies w/BMPs
- 4) Manage quality & distribution of wildlife habitat and biological diversity
- 5) Manage visual impact of harvesting and other forest operations
- 6) Manage ecological, historical, cultural sites

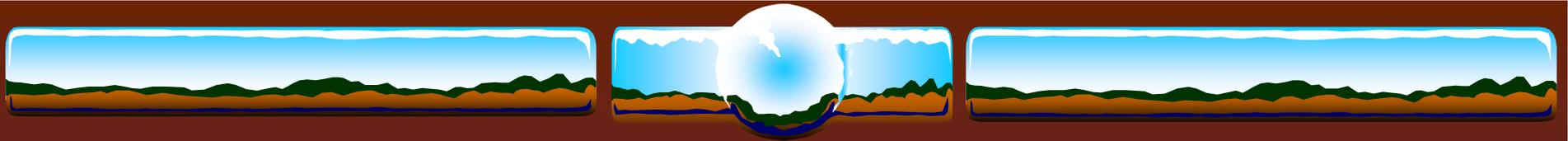


Forest Certification - SFI Objectives

- 7) Promote efficient resource utilization
- 8) Broaden sustainable forestry through wood procurement systems
- 9) Improve research, science, technology
- 10) Improve practice by foresters, loggers, operators w/training and education
- 11) Comply with federal, state, local regs
- 12) Provide for public participation
- 13) Promote continual improvement; monitor, measure, and report progress



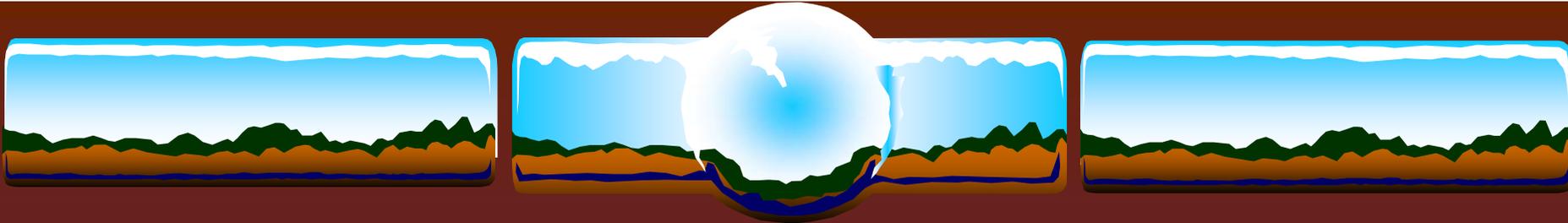




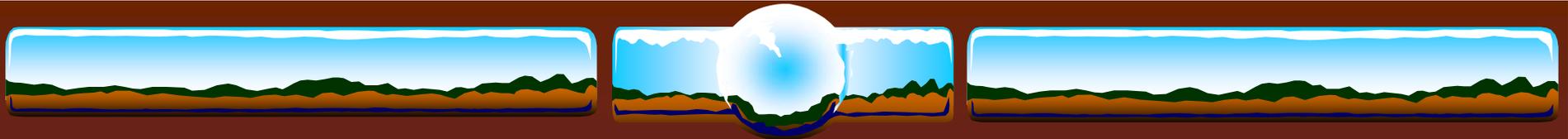
Forest Certification - FSC Principles

- 1) Compliance with laws & FSC principles
- 2) Tenure and use rights & responsibilities
- 3) Indigenous people's rights
- 4) Community relations & worker's rights
- 5) Benefits from the forest (multiple)
- 6) Environmental impact (biodiversity)
- 7) Management plan
- 8) Monitoring and assessment
- 9) Maintain high conservation value forests
- 10) Plantations





Certification Impacts



Wisconsin Survey of FSC Benefits/Satisfaction

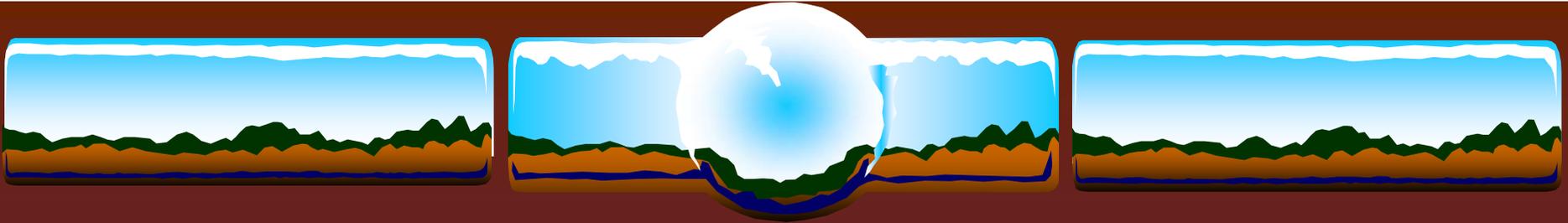
Three Roles for Certification

- Market-based incentives
 - Price premiums
 - Market share
- Signal of high forestry standards to external stakeholders
- Improve forest practices through learning
 - Technology transfer to owners
 - Encourages more management review and adapting new practices
- Survey of 91 FSC certified forest owners in U.S.



Wisconsin Survey of FSC Results

- Market-based incentives
 - Ranked moderately high
 - More important with large owners
 - Low satisfaction among all owners
- Signal to external stakeholders
 - Highest expectations, highest satisfaction, all owners
- Improved learning
 - Lowest expectations of 3; moderate satisfaction
 - Public owners received greatest benefit
- Overall assessment
 - Large private and public – mostly positive
 - Small private – neither positive or negative
 - Most will re-certify
 - Most but small owners recommend FSC



**Cubbage, Moore, and Colleagues
North Carolina State University
Certification Impact Evaluation in Americas**

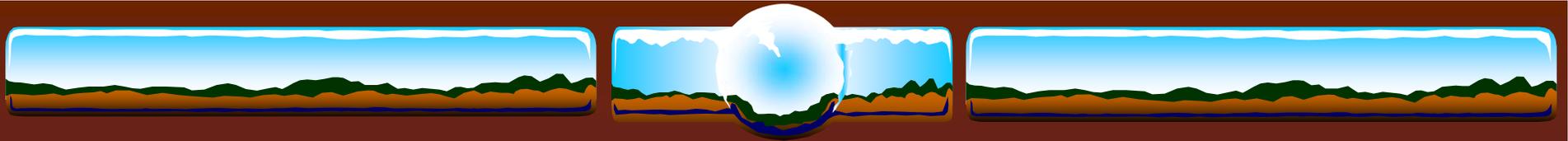
SFI – USA and Canada – 2007

FSC – USA – 2007

FSC – Argentina - 2006

CertFor and FSC – Chile – 2007

ATFS - 2008



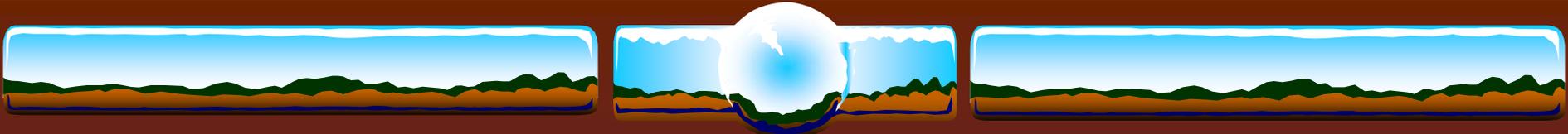
NCSU Certification Impact Study

- ❑ Survey of certification impacts in the Americas
- ❑ Extensive survey of
 - Personnel changes and job descriptions
 - Changes in forest management, social and legal aspects, economics and program administration
 - Summary of non-conformances or conditions
 - Benefits and problems with certification
 - Satisfaction and recommendations
- ❑ Questionnaire reviewed by SFI, AF&PA, FSC, ATFS, USDA FS, University sectors
- ❑ Used for all sectors
- ❑ Implemented sequentially across Americas

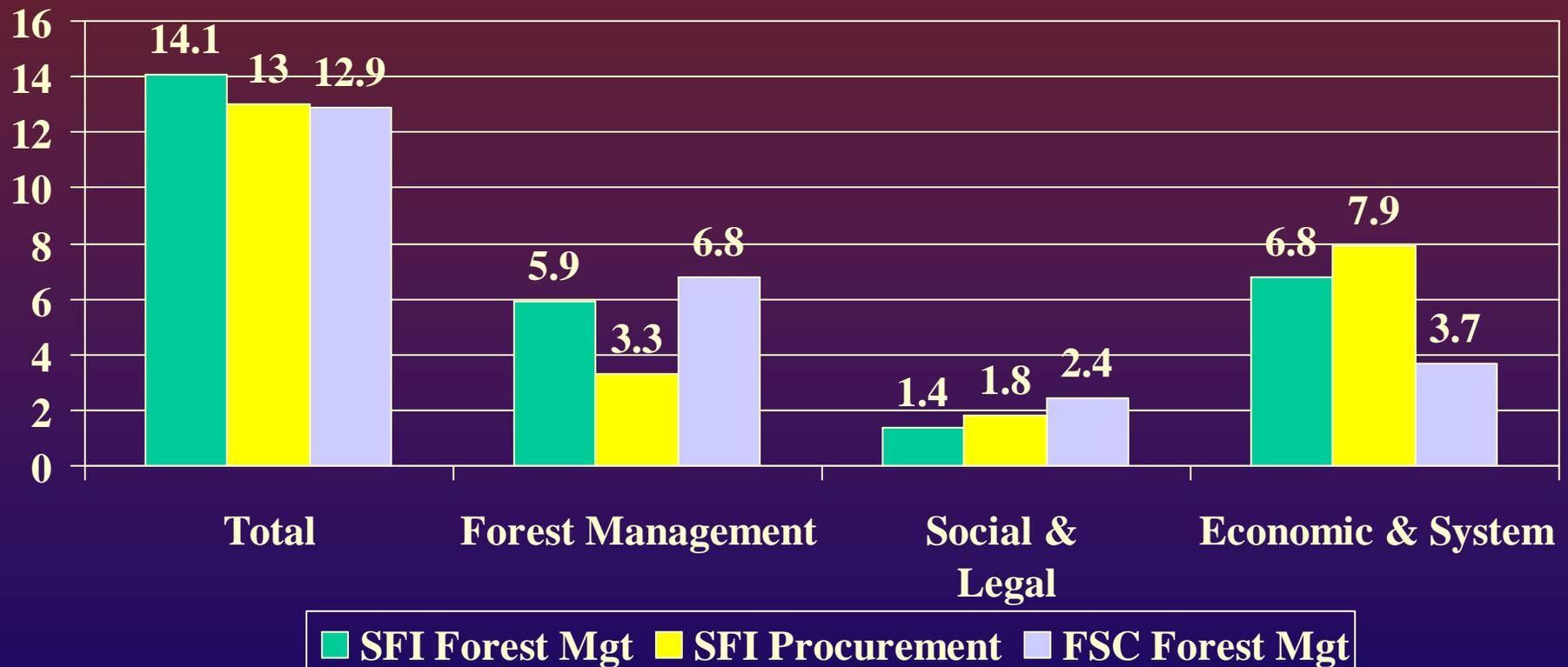


Responses Rate, New Employees, Assignments, and Time Devoted to Certification

	SFI Forest Management	SFI Wood Procurement	FSC Forest Management
Responses – Number (%)	41 / 66(62%)	14 / 26 (54%)	52 / 98 (53%)
Firms Adding Employees for Certification - Number (%) {~1-2 added}	11 (28%)	4 (27%)	13 (25%)
Firms Reassigning Employees for Certification - Number (%) {1-8 reassigned}	28 (70%)	10 (67%)	18 (35%)
Share of Employee Efforts Devoted to Certification (%)	9.8%	8.1	9.5%
Average Hours Required for Certification Remedy / CARs (Number)	164	0	956



Average Number Management Changes with Forest Certification by Type and System



Sample: SFI FM = 41; SFI Proc = 14; FSC FM = 52



Forest Management Notable Changes with Certification

Practices with “Yes” Reply, Changes Made	SFI (n=41)	FSC (n=52)
Implementation monitoring	25	28
BMP use and monitoring	23	18
Meeting green-up standards	20	10
Determining clearcut size	14	10
Sustained yield / adjacency constraints	15	19
Biological diversity planning	16	16
Old growth / Special site reserves	10	30
Geographic information systems	13	18
Forest management plan	10	40
Chemical, soil protection, or plantation guidelines	9, 4, 4	18, 14, 6
Eliminating GMOs	0	3

Cubbage and Moore 2008, 13 of 22 practices listed above
 FSC for U.S. only; SFI for U.S. and Canada combined; SFI for landowning firms only



Social and Legal Notable Changes with Certification

Practices with “Yes” Reply, Changes Made	SFI (n=41)	FSC (n=52)
Legal planning and record keeping	11	15
Public / stakeholder meetings	8	19
Public release of management plan	6	21
Protecting indigenous rights	7	14
Offer program workshops	6	6
Comply with international treaties	1	5
Consulting with communities	6	20
Comply with environmental laws	3	2
Establishing tenure rights	0	1
Ensuring labor rights and practices	0	3

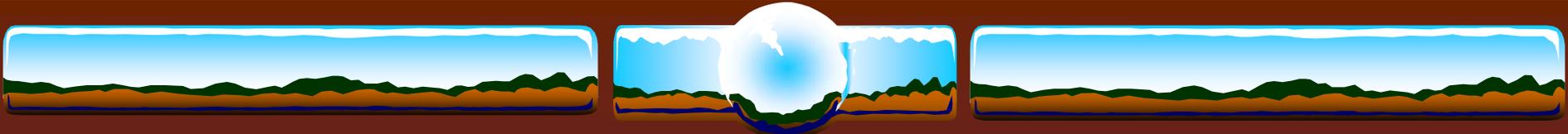
Cubbage and Moore 2008, 10 of 13 practices listed above
 FSC for U.S. only; SFI for U.S. and Canada combined; SFI for landowning firms only



Economic and System Notable Changes with Certification

Practices with “Yes” Reply, Changes Made	SFI (n=41)	FSC (n=52)
SIC / FSC promotion duties	32	16
Logger/supplier training	31	8
Program reporting	27	13
Management review system	26	16
Internal program monitoring/auditing	28	25
Customer inquiries/procurement	18	9
Chain of custody implementation	15	32
Natural heritage / reserves planning	15	22
Forest research / demonstration	13	4
Community grants and support	4	4
Utilization planning and practices	3	1

Cubbage and Moore 2008, 11 of 17 practices listed above
 FSC for U.S. only; SFI for U.S. and Canada combined; SFI for landowning firms only

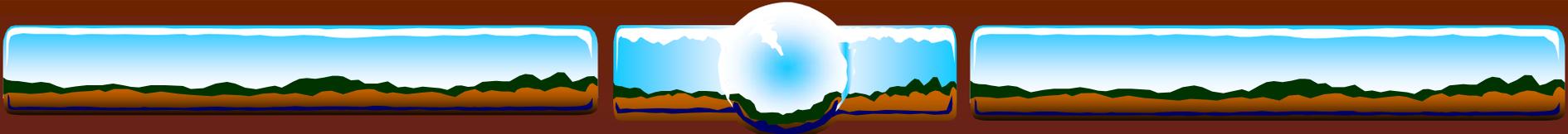


Certification Costs, 2007

Statistic / N (unit)	SFI	FSC
Median		
Area / 36 (ha)	133,727	22,258
Cost / 17 (\$/ha)	0.37	0.91
Mean		
Area / 45 (ha)	992,675	251,392
Cost / 14 (\$/ha)	4.92	3.24

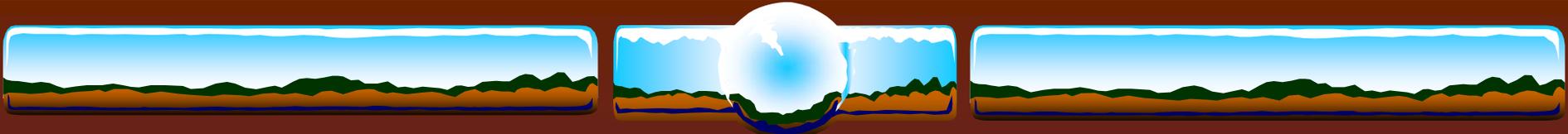
Note: No statistically significant differences by system; only by land size class

Cubbage et al 2008; FSC for U.S. only; SFI for U.S. and Canada combined



Median Costs for Certification by Ownership Size (\$/ha/yr)

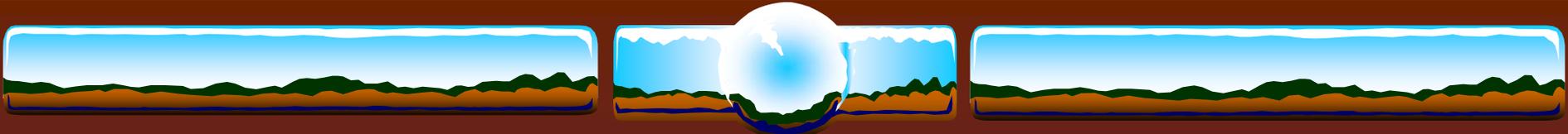




Median Certification Costs by Cost Component, 2007 (\$/ha/yr)

Component	SFI (n)	FSC (n)
Total Cert. Expenses	0.37 (18)	0.91 (14)
Internal Prep. Fees	0.11 (11)	0.48 (7)
External Audit Fees	0.19 (15)	0.36 (16)
Ongoing Prep. Costs	0.15 (9)	0.46 (12)
Community Ed.	0.01 (4)	0.04 (4)
Mgt. Changes	0.02 (2)	0.06 (4)
SIC / FSC Comms.	0.02 (10)	.02 (1)

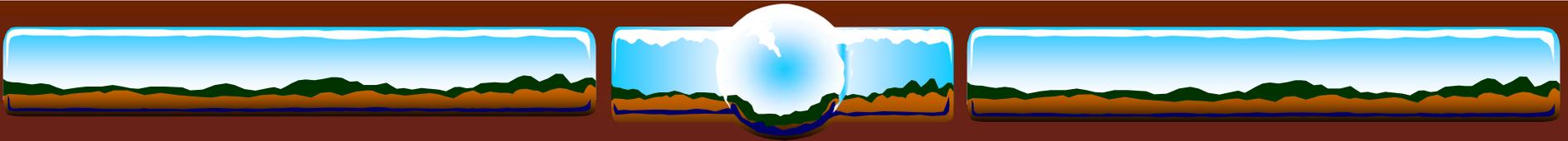
Cubbage et al 2008; FSC for U.S. only; SFI for U.S. and Canada combined



Certification Costs vs. Benefits

	SFI (no.)	FSC (no.)
Benefits greatly exceed costs	7	8
Benefits exceed costs	10	10
Benefits = costs	10	7
Costs exceed benefits	8	12
Costs greatly exceed benefits	2	8

Cubbage et al 2008; FSC for U.S. only; SFI for U.S. and Canada combined

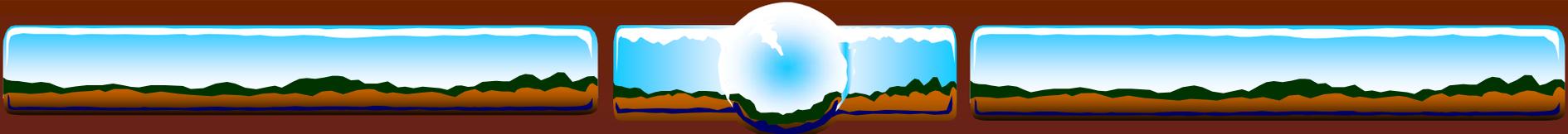


Expected & Realized Benefits of Forest Certification

System / Factor	Expected Benefit		Actual Benefit	
	SFI	FSC	SFI	FSC
Strategic / CSR	3.9	3.6	3.5	3.4
External Signaling	4.2	3.9	3.7	3.8
Market Share / Prices	3.2	3.7	2.0	1.9
Internal Mgt, Records	3.3	3.0	3.7	3.3

Ranking: 1=not important; 2=somewhat important; 3-neutral; 4=important; 5=very important

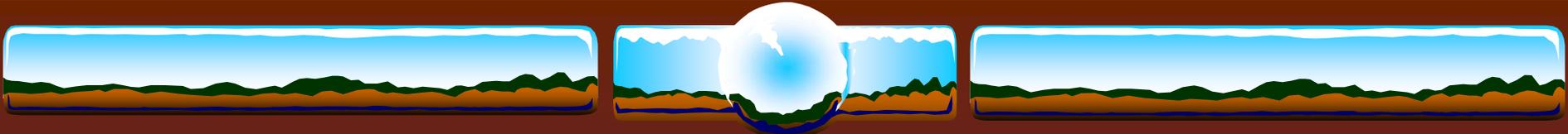
Cabbage et al 2008; FSC for U.S. only; SFI for U.S. and Canada combined



Has Certification Achieved Objectives?

	SFI (no.)	FSC (no.)
Definitely yes	12	17
Probably yes	23	17
Uncertain	5	4
Probably not	2	6
Definitely not	0	7

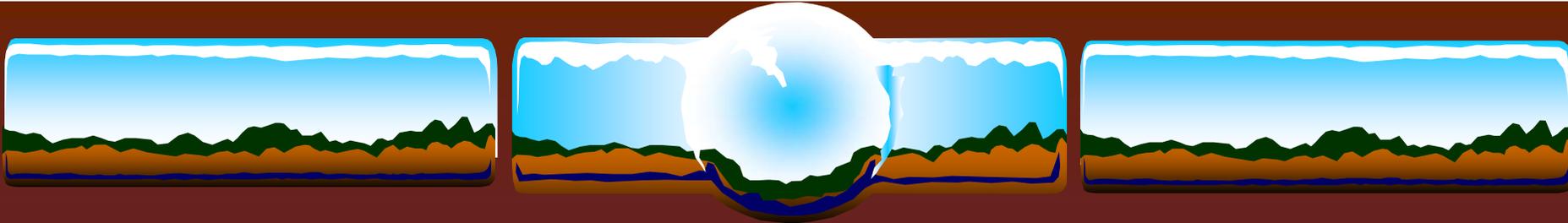
Cubbage et al. 2008, FSC for U.S. only; SFI for U.S. and Canada combined



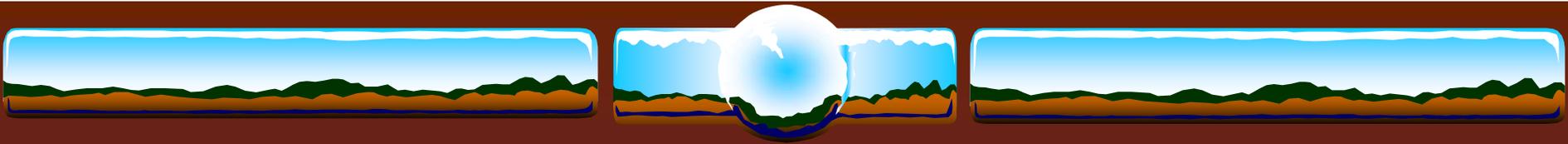
Will Organization Maintain Certification?

	SFI (no.)	FSC (no.)
Definitely yes	18	14
Probably yes	20	22
Uncertain	3	12
Probably not	1	3
Definitely not	0	1

Cubbage et al. 2008, FSC for U.S. only; SFI for U.S. and Canada combined

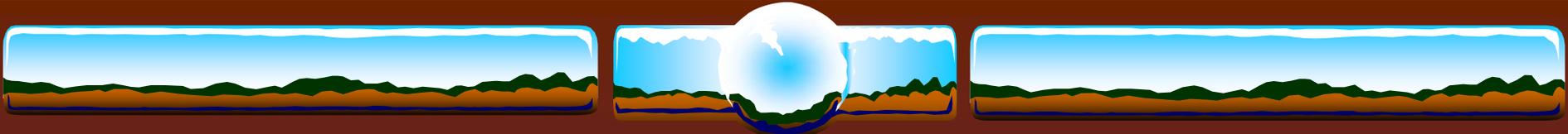


Discussion and Conclusions



Summary - Certification Extent

- Certification area, 2008
 - 322 million ha; 8% of forests
 - Greater share of closed forests and plantations
 - U.S.A.: about 40 million ha; 14% of forests
- PEFC largest / umbrella system
 - SFI - 61 million ha; 22 million in U.S
 - Europe – 57 million ha
 - CSA – 76 million ha
- FSC 104 million ha; 10 million ha in U.S.A.



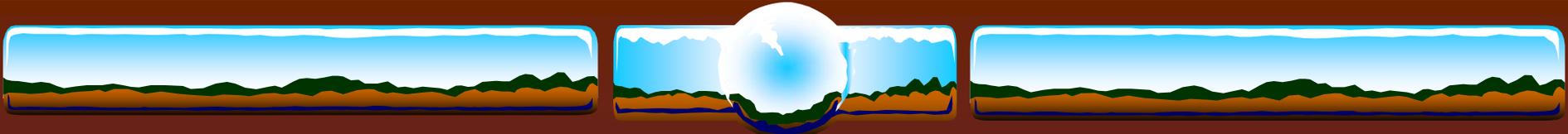
Summary - Methods Recap

- ❑ Survey of certified forest managers
 - All SFI program participants – Canada & U.S
 - All FSC forest management certificate holders – U.S.
- ❑ Assessed changes in forest management
 - Forest management
 - Social and legal
 - Economic and system
- ❑ Costs by system
- ❑ And personnel, opinions, satisfaction
- ❑ ~55% return rates
- ❑ Representative sample of firm sizes



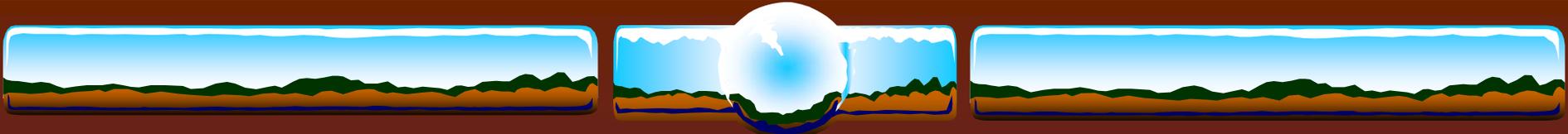
Conclusions - Many Management Changes: Forest Certification Improves Practices

- ❑ Substantial number of management, social, and system changes with certification
- ❑ Average of about 13-14 changes in all management practices per company, both systems
 - SFI – changes before certification or to maintain cert
 - FSC – prior changes & continuing action requirements
 - Fairly similar sets of changes with both SFI and FSC
 - FSC: more forest management, social changes
 - SFI: more economic / system changes
- ❑ SFI Procurement
 - Same proportions as Forest Management owners
 - Fewer total changes, fewer forest mgt changes



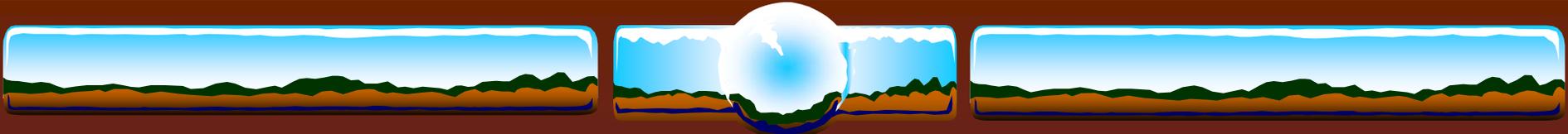
Comparative Management Changes

- SFI – more changes in:
 - Management: green up standards, BMP use & monitoring, determining clearcut size
 - Social: few
 - Economic/system: SIC participation, logger training, management review
- FSC – more changes in:
 - Management: sustained yield, special sites & reserves, forest management plans, chemicals, soil protection, and eliminating GMOs
 - Social: stakeholder meetings, release of management plan, consulting with communities
 - Economic/system: legal planning and record keeping



Costs

- ❑ Much higher costs for small owners; less for large
- ❑ Median much less than \$1 / ac / yr, but wide range
- ❑ SFI average less, but includes large owners in Canada
- ❑ No significant differences in costs between systems when ownership size accounted for
- ❑ Benefits vs. Costs
 - Opinions distributed widely
 - Somewhat less favorable perceptions for FSC
 - But most owners in both systems will re-certify



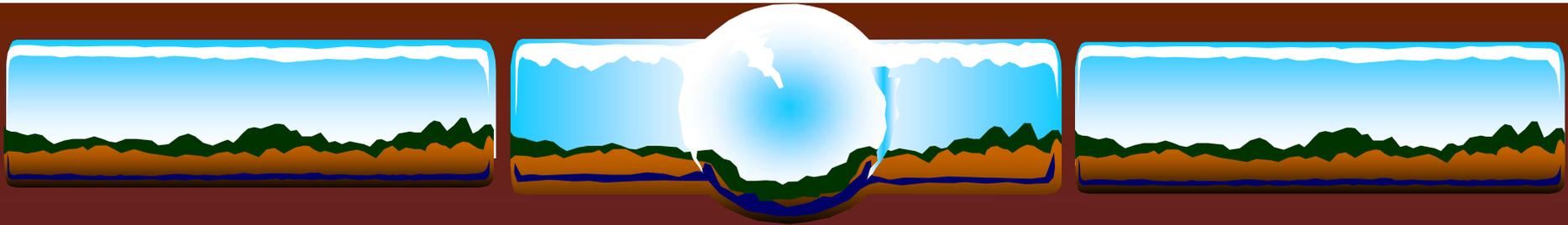
Anticipated and Realized Satisfaction

- ❑ Strategic / Corporate Social Responsibility:
 - Moderate expectations
 - realized ~ anticipated
- ❑ External Signaling
 - high expectations
 - realized ~< anticipated
- ❑ Market share / prices
 - low to moderate expectations
 - realized << anticipated
- ❑ Internal management, records
 - low expectations
 - realized >> anticipated



Conclusions: Impacts

- ❑ Certification has changed forest, social, and economic practices
 - For SFI and FSC
 - More economic for SFI
 - More environmental and social for FSC
- ❑ Similar results to prior Latin America surveys
 - Where total changes were about 3 times CARs
- ❑ Most organizations feel certification has achieved their objective
- ❑ And will maintain certification in the future
- ❑ Enhancing sustainable forest management



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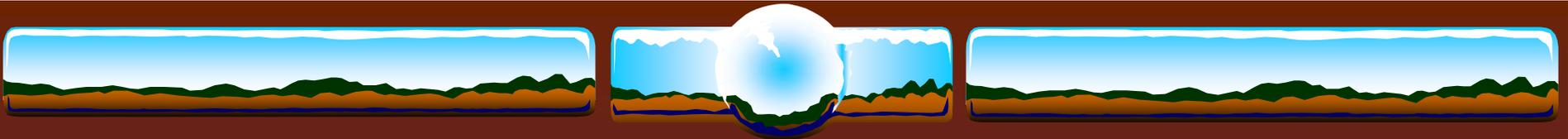
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Argentina and Chile

FSC and CertFor Impact Evaluation

- Co-PIs
 - Pablo Yapura (FSC/Universidad de la Plata, Argentina)
 - Diana Diaz (INTA, Argentina)
 - Francis Dube (Universidad de Concepción)
- Firm characteristics
 - Argentina – 220 ha to 22,000 ha
 - Chile – 144,000 ha to 1.1 million ha
 - Private, sector leaders in conservation and social reputation
 - Mostly exporters, but not all of production
- Process
 - Personal interviews and contacts
 - Firm review and corrections





PARQUE
Oncol

Un Compromiso con la Vida

Lo que la naturaleza creó por miles de años,
desde 1989 Arauco se ha encargado de resguardar y proteger.

Damos la bienvenida a este lugar único y de
naturaleza virgen: la "Selva Valdiviana".

Compartamos juntos la aventura y los invitamos
a disfrutar este lugar maravilloso, rico en flora y fauna.

Bienvenidos

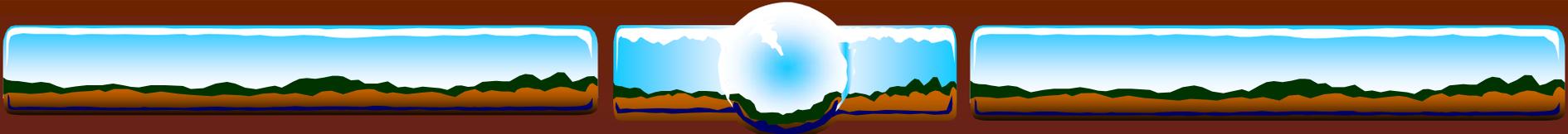




Argentina and Chile

Major Changes with Certification

Practices with “Yes” Reply, Changes Made	Argentina FSC (n=6)	Chile – FSC & CertFor (n=3)
Forest management plan	6	2
Legal planning and record keeping	6	2
Logger / supplier training	6	3
Chemical safety, use, storage	5	3
Prevention of exotic invasives	5	2
Consulting with communities	5	3
Social impact analyses	5	2
Outreach and extension	5	3
Public relations / education	5	3
Internal program monitoring / auditing	5	2
Natural heritage planning reserves	5	3



Argentina and Chile

- ❑ Forestry sector leaders in practices
- ❑ Few new employees
- ❑ Small changes in job description or appointment
- ❑ Lots of preparation, consultant studies
- ❑ But more a change in the way of thinking and doing business than the work performed once adopted
- ❑ Significant number of conditions each year, 2-6; 9 total
- ❑ Average of 27 total changes made by firms
- ❑ Has improved worker conditions, continuous improvement, the environment
- ❑ Still needs price benefits, stronger market structure to improve prices, more recognition for certified products in domestic markets