



FSC US Controlled Wood Monitoring & Effectiveness Evaluation *Public Summary, 2020-2021*

Background

In the global context, the United States is considered relatively low risk for the five categories of unacceptable practices in FSC's Controlled Wood standard (FSC-40-005 V3-1). However, the US NRA (2018), defines limited sources of risk which certificate holders sourcing Controlled Wood from the US are required to address – namely high conservation values (HCV) and forest conversion. Because of geographic and economic complexities characteristic of US forests and forest products markets, the US NRA includes landscape scale risk designations and control measures that depend on the combined impact of mitigation actions implemented by FSC CW/CoC certificate holders. Accordingly, verification of the effectiveness of mitigation must occur at a landscape scale, and FSC US has accepted this responsibility.

Monitoring Framework

The “*FSC Us Controlled Wood National Risk Assessment: Monitoring & Effectiveness Evaluation Framework*” was approved by FSC International in 2020. The objective of the framework is to 1) provide evidence that the risk of sourcing unacceptable materials is decreasing within each specified risk area and 2) gather monitoring data to evaluate the program's effectiveness in producing on-the-ground changes in forest management.

The monitoring framework includes the following three tiers:

Tier 1: Coarse scale ecoregion assessment of forests associated with specified risks.

Tier 2: Wood basket identification and fine scale specified risk assessment.

Tier 3: Based on wood baskets identified in Tier 2, develop partnerships to characterize, assess, and monitor effectiveness for common mitigation options (e.g., education and outreach, procurement policy, and conservation initiatives).

FSC has partnered with AFF on monitoring activities associated with Tier 2 and Tier 3 assessments/data collection (see Appendix B for scope of work). Specifically, AFF conducted a pilot monitoring project in five specified risk areas in the US Southeast, including the Central Appalachian Critical Biodiversity Area, the Florida Panhandle Critical Biodiversity Area, Native Longleaf Pine Systems, Late Successional Bottomland Hardwoods, and Forest Conversion. This partnership brought substantial reach and learning capacity to this broader monitoring effort. AFF's pilot project summary results are included below.

Key Findings: Inference About the US Controlled Wood Approach

- Certificate holder conformance with requirements is very high
- The US Controlled Wood framework will likely reduce sourcing risk by having an impact on ecological conditions and changing forestry sourcing practices in specified risk areas – however, this is not yet happening.

Key Findings: Mitigation Option Implementation

- Most controlled wood/chain of custody (CW/CoC) Certificate Holder Survey respondents were sourcing from the US Appalachian and US Southeast regions, and most mitigation activity had been directed at large HCV ecosystems and critical biodiversity areas, as opposed to the finer scale risk areas for HCV species. Additionally, all HCV species and CBAs in Florida and California had fewer than 5% of survey respondents indicate implementing mitigation activities in these areas. Further investigation is needed to determine if the low sourcing pressure by FSC certificate holders is indicative of broader sourcing trends and what bearing that has on the specified risk status of these HCV.
- Education and Outreach was by far the most common mitigation option, followed (rather significantly) by Procurement Policies and Conservation Initiatives.
- Most Education and Outreach material delivered met the requirements and intent of this option and was delivered to a broad audience of supply chain actors. Most often, certificate holders engaged consultants to develop educational materials, often in collaboration with relevant environmental non-profits (ENGOS).
- There can be quality issues between the different Education and Outreach material that is developed. There are opportunities to enable better connections between certificate holders, ENGOS, and consultants; encouraging more consultants or conservation partners to assist certificate holders; and developing more clear guidance on the required contents for Education and Outreach materials.
- Conservation Initiatives may allow FSC certificate holders to further engage with important conservation partnerships that are managed by other large ENGOS and governments. However, these opportunities were most often only available to large organizations with greater wherewithal. Going forward, FSC US could allocate additional resources toward networking with conservation partnership managers to make these opportunities more available to smaller organizations.
- The monitoring effort produced valuable baselining information and effort characterizations that are being used to inform Controlled Wood regional meetings and NRA revisions.

Key Findings: Additional Future Improvement Opportunities

- Designing mitigation options with monitoring in mind could improve FSC US's ability to monitor the implementation and effectiveness of these actions. For, instance, conservation partners and recipients of risk mitigation information were often unable to associate these efforts with FSC. Conservation partners are already engaged to develop and distribute education and outreach material, for instance, on behalf of certificate holders, but the structure of these relationships could be greatly improved to standardize materials, build better relationships with ENGOS and supply chain members (specifically landowners who normally require many touchpoints to change behavior), and better track progress.
- Certification bodies likely could provide an excellent source of programmatic information that should be utilized in future monitoring.
- The data collected is a baseline and should be used to guide future monitoring and in determining frequency of monitoring.

- How stakeholder feedback is gathered can be improved upon. Findings were that most recipients did not respond to our surveys and that the organizations that did provide feedback were normally very familiar with the controlled wood program. In the future, more insightful feedback by simplifying survey content, working with professional service organizations
- Additional guidance for scaling risk mitigation and frequency of mitigation is needed

Certificate Holder Reporting

2020 Certificate Holder Survey

In 2020, a survey was sent to all 193 certificate holders with valid CW/CoC certificates and received 122 responses (of which 112 were useable). The survey covered all regions of the US and all specified risks.

The survey results indicate that that approximately 70% of respondents were sourcing wood that had not previously been controlled (i.e., they were implementing the Controlled Wood Standard), while approximately 30% were either only sourcing wood that had previously been controlled or were not sourcing controlled wood at all (Tier 3 Mitigation Dashboard). Nearly half of the survey respondents were sourcing from the US Appalachian region, and one third of respondents were sourcing from the US Southeast region. Similarly, most certificate holders implemented mitigation options in the largest risk areas associated with the US Appalachian and Southeast regions – namely the critical biodiversity areas (CBAs) and large ecosystems (e.g., Native Longleaf Pine Systems). Relatively little mitigation effort had been directed at risk areas associated with HCV species or any of the risk areas located in the US Rocky Mountain or Pacific Coast regions.

Of the 695 mitigation options reported via this survey, 509 were Education & Outreach, 51 were Procurement Policies, and 33 were Conservation Initiatives.

TABLE 1 - Survey Respondents Sourcing from Specified Risk Areas by US Region¹

Pacific Coast (PC), Southeast (SE), Appalachian (APP), Rocky Mountain (RM), Mississippi Alluvial Valley (MAV)

Specified Risk	PC	SE	APP	RM	MAV
Category 4: Forest Conversion	45	32	0	0	0
HCV 1: Cape Fear Arch Critical Biodiversity Area	0	14	0	0	0
HCV 1: Central Appalachians Critical Biodiversity Area	0	0	56	0	0
HCV 1: Central California Critical Biodiversity Area	21	0	0	0	0
HCV 1: Central Florida Critical Biodiversity Area	0	7	0	0	0
HCV 1: Cheoah Bald Salamander	0	0	20	0	0
HCV 1: Dusky Gopher Frog	0	13	0	0	0
HCV 1: Florida Panhandle Critical Biodiversity Area	0	17	0	0	0
HCV 1: Houston Toad	0	5	0	0	0
HCV 1: Klamath-Siskiyou Critical Biodiversity Area	38	0	0	0	0
HCV 1: Lesser Slender Salamander	17	0	0	0	0
HCV 1: Patch-nosed Salamander	0	17	0	0	0
HCV 1: Southern Appalachians Critical Biodiversity Area	0	26	30	0	0
HCV 3: Late Successional Bottomland Hardwoods	0	42	0	0	24
HCV 3: Mesophytic Cove Sites	0	0	60	0	0

Specified Risk	PC	SE	APP	RM	MAV
HCV 3: Native Longleaf Pine	0	41	0	0	0
HCV 3: Old Growth Forest	47	0	0	26	0

¹ Total survey respondents sourcing from each region are as follows: 56 PC Region, 50 SE Region, 73 APP Region, 26 RM Region, 24 MAV Region

Specific to the Pacific Coast Region

In the PC Region, five Specified Risk Areas exist, and 173 total mitigation options were implemented on behalf of survey respondents seeking to control those specified risks (Table 9). Of these 142 were Education and Outreach. Mitigation effort was directed at Specified Risk Areas in the following order of most effort to least effort (Tables 7, 8, and 9):

- HCV 3: Old Growth Forest (84% of respondents sourcing regionally, 55 mitigation efforts; 45 Education and Outreach)
- Category 4: Forest Conversion (80% of respondents sourcing regionally, 42 mitigation efforts; 32 Education and Outreach)
- HCV 1: Klamath-Siskiyou Critical Biodiversity Area (68% of respondents sourcing regionally, 34 mitigation efforts; 29 Education and Outreach)
- HCV 1: Central California Critical Biodiversity Area (38% of respondents sourcing regionally, 24 mitigation efforts; 20 Education and Outreach)
- HCV 1: Lesser Slender Salamander (30% of respondents sourcing regionally, 18 mitigation efforts; 16 Education and Outreach)

The majority of certificate holders in the Pacific Coast region engaged a consultant who then partnered with a conservation organization to develop material. A few certificate holders partnered directly with an NGO and 5 respondents did not partner with others.

TABLE 2 - Mitigation options implemented by specified risk area in the Pacific Coast Region

Specified Risk Area	Mitigation Options								Totals
	Education & Outreach	Procurement Policy	Research and Mapping	Conservation Initiatives	Staff/ Forester Training	Planning	Imp. Mgmt. Activities	Landowner Incentives	
HCV 3: Old Growth Forest	45	5	0	0	3	1	0	1	55
Category 4: Forest Conversion	32	4	2	3	0	1	0	0	42
HCV 1: Klamath-Siskiyou Critical Biodiversity Area	29	3	1	0	0	0	1	0	34
HCV 1: Central California Critical Biodiversity Area	20	3	1	0	0	0	0	0	24
HCV 1: Lesser Slender Salamander	16	2	0	0	0	0	0	0	18
Pacific Coast Totals	142	17	4	3	3	2	1	1	173

Specific to the Rocky Mountain Region

In the Rocky Mountain region, just the HCV 3: Old Growth Forest Specified Risk Area exists, and 30 total mitigation options were implemented on behalf of respondents seeking to control that specified risk. Of these 25 were Education and Outreach. Mitigation effort was directed as follows.

The majority of certificate holders in the Rocky Mountain region engaged a consultant who then partnered with a conservation organization to develop material. A few certificate holders partnered directly with a NGO and 3 respondents did not work with others.

TABLE 3 - Mitigation options implemented by specified risk area in the Rocky Mountain Region

Specified Risk Area	Mitigation Options							Totals
	Education & Outreach	Procurement Policy	Staff/Forester Training	Planning	Landowner Incentives	Research & Mapping		
HCV 3: Old Growth Forest	25	3	2	0	0	0	30	
Rocky Mountain Totals	25	3	2	0	0	0	30	

Specific to the Appalachian Region

In the Appalachian Region, three Specified Risk Areas exist, and 170 total mitigation options were implemented on behalf of survey respondents seeking to control those specified risks (Table 2). Of these 116 were Education and Outreach. Mitigation effort was directed at Specified Risk Areas in the following order of most effort to least effort:

- HCV 3: Mesophytic Cove Sites (82% of respondents sourcing regionally, 74 mitigation efforts; 52 Education and Outreach)
- HCV 1: Central Appalachian Critical Biodiversity Area (77% of respondents sourcing regionally, 73 mitigation efforts; 47 Education and Outreach)
- HCV 1: Cheoah Bald Salamander (27% of respondents sourcing regionally, 23 mitigation efforts; 17 Education and Outreach)

For Education & Outreach mitigation options, 18 certificate holders in the Appalachian region engaged a consultant who then partnered with a conservation organization to develop material. A few certificate holders partnered directly with an NGO and 18 respondents did not partner with others.

TABLE 4 - Mitigation options implemented by specified risk area in the Appalachian Region

Specified Risk Area	Mitigation Options							
	Education & Outreach	Research and Mapping	Conservation Initiatives	Staff/ Forester Training	BMP Monitoring	Direct Influence	Procurement Policy	Totals
HCV 3: Mesophytic Cove Sites	52	14	0	8	0	0	0	74
HCV 1: Central Appalachian CBA	47	8	8	0	6	4	0	73
HCV 1: Cheoah Bald Salamander	17	1	2	0	0	0	3	23
Appalachian Totals	116	23	10	8	6	4	3	170

Specific to the Southeast Region

In the Southeast Region, ten Specified Risk Areas exist, and 252 total mitigation options were implemented on behalf of respondents seeking to control those specified risks (Table 2). Of these 178 were Education and Outreach. Mitigation effort was directed at Specified Risk Areas in the following order of most effort to least effort:

- HCV 3: Native Longleaf Pine Systems (82% of respondents sourcing regionally, 50 mitigation efforts; 36 Education and Outreach)
- HCV 3: Late Successional Bottomland Hardwoods (84% of respondents sourcing regionally, 44 mitigation efforts; 36 Education and Outreach)
- Category 4: Forest Conversion (64% of respondents sourcing regionally, 42 mitigation efforts; 27 Education and Outreach)
- HCV 1: Southern Appalachians Critical Biodiversity Area (52% of respondents sourcing regionally, 31 mitigation efforts; 19 Education and Outreach)
- HCV 1: Patch-nosed Salamander (34% of respondents sourcing regionally, 19 mitigation efforts; 15 Education and Outreach)
- HCV 1: Dusky Gopher Frog (26% of respondents sourcing regionally, 18 mitigation efforts; 12 Education and Outreach)
- HCV 1: Florida Panhandle Critical Biodiversity Area (34% of respondents sourcing regionally, 17 mitigation efforts; 13 Education and Outreach)
- HCV 1: Cape Fear Arch Critical Biodiversity Area (28% of respondents sourcing regionally, 16 mitigation efforts; 11 Education and Outreach)
- HCV 1: Central Florida Critical Biodiversity Area (14% of respondents sourcing regionally, 9 mitigation efforts; 5 Education and Outreach)
- HCV 1: Houston Toad (10% of respondents sourcing regionally, 6 mitigation efforts; 4 Education and Outreach)

The majority of certificate holders in the Southeast Region engaged a consultant, or did not work with others. A few certificate holders partnered with the Forest Stewards Guild and Longleaf Alliance.

TABLE 5 - Mitigation options implemented by specified risk area in the Southeast Region

Specified Risk Area	Mitigation Options									
	Education & Outreach	Procurement Policy	Implement Mgmt. Activities	Conservation Initiatives	Direct Influence	Planning	Research & Mapping	Cape Fear Arch Cons. Collab	Landowner Incentive	Totals
HCV 3: Native Longleaf Pine Systems	36	3	9	0	0	1	0	0	1	50
HCV 3: Late Successional Bottomland Hardwoods	36	3	5	0	0	0	0	0	0	44
Category 4: Forest Conversion	27	7	0	6	0	2	0	0	0	42
HCV 1: Southern Appalachians CBA	19	1	0	4	5	0	2	0	0	31
HCV 1: Patch-nosed Salamander	15	2	0	1	0	0	1	0	0	19
HCV 1: Dusky Gopher Frog	12	4	2	0	0	0	0	0	0	18
HCV 1: Florida Panhandle CBA	13	1	0	3	0	0	0	0	0	17
HCV 1: Cape Fear Arch CBA	11	3	0	1	0	0	0	1	0	16
HCV 1: Central Florida CBA	5	1	2	1	0	0	0	0	0	9
HCV 1: Houston Toad	4	2	0	0	0	0	0	0	0	6
Southeast Totals	178	27	18	16	5	3	3	1	1	252

Specific to the Mississippi Alluvial Valley Region

In the Mississippi Alluvial Valley Region, just the HCV 3: Late Successional Bottomland Hardwoods Specified Risk Area exists, and 26 total mitigation options were implemented on behalf of survey respondents seeking to control that specified risk (Table 3). Of these 22 were Education and Outreach. Mitigation effort was directed as follows.

The majority of certificate holders in the Mississippi Alluvial Valley Region engaged a consultant, or partnered with the Forest Stewards Guild. A few certificate holders did not work with others.

TABLE 6 - Mitigation options implemented by specified risk area in the Miss. Alluvial Valley Region

Specified Risk Area	Mitigation Options					
	Education & Outreach	Implement Mgmt. Activities	Procurement Policy	Research & Mapping	Landowner Incentives	Totals
HCV 3: Late Successional Bottomland Hardwoods	22	3	1	0	0	26
Mississippi Alluvial Valley Totals	22	3	1	0	0	26

Certificate Holder Reporting Summary

Most of the mitigation options implemented were Education and Outreach. This makes tying effort to on-the-ground effectiveness difficult and obfuscates the ability to assess the minimal effort that has been directed at other mitigation options. If this trend continues, it will be exceedingly important to rely on stakeholder consultation as a means of verifying the effectiveness of this mitigation option.

Research and Mapping was used more frequently in the Appalachian Region than other regions, along with Procurement Policies and Staff Training.

The most common survey response in the Southeast, Appalachian and Mississippi Alluvial Regions regarding partnerships was that there was no partner organization, or the partnering organization was not identified. When respondents indicated that there was no partner organization in the Appalachian Region, Education and Outreach as well as Research/Mapping/Research were the most common mitigation options implemented. When respondents indicated that there was no partner organization in the Southeast Region, Education and Outreach was the most common mitigation option reported, with Procurement Policy, Conservation Initiatives, and Implement Management Activities also reported. There was very little information to be gleaned on issues for organizations that created their own mitigation materials.

NGO engagement in the Pacific Coast and Rocky Mountain regions were virtually nonexistent, whereas much more prolific in the southern and eastern regions.

For certificate holders that did partner with another organization, the primary partners reported in the Appalachian Region were Forest Stewards Guild (FSG) and The Nature Conservancy (TNC). The primary partners reported in the Southeast, Appalachian, and Mississippi Alluvial Valley Regions were American Forests Foundation (AFF), Longleaf Alliance (LLF), Forest Stewards Guild (FSG) and The Nature Conservancy (TNC). The mitigation options associated with these organizations ranged from Education and Outreach to Conservation Initiatives (via financial and other support for the NGO's initiatives). TNC partnerships were associated with on-the-ground management activities for Native Longleaf Pine Systems in the Southeast Region and TNC's Working Woodlands and Family Forest Carbon Programs in the Appalachian Region. Partnerships with FSG focused on Education and Outreach, but in the Mississippi Alluvial Valley region they also partnered to develop a bottomland hardwood management task group. Many organizations in the Southeast Region have partnered with American Forest Foundation (AFF) on AFF's conservation acreage targeting initiatives. The Longleaf Alliance was reported as being a partner on restoration activities associated with Native Longleaf Pine Systems, including on-the-ground conservation/restoration (e.g., prescribed burn of 50K acres of longleaf

pine), a unique 5-year partnership on restoration of longleaf pine stands and improved management of existing stands.

In the Southeast Region partnerships with American Forest Foundation (AFF) focused on AFF's conservation acreage targeting initiatives. Survey respondents also report relationships that are indicative of other direct partnerships with AFF or reflect financial/other support for the American Tree farm system and are categorized as Education and Outreach or Conservation Initiatives.

Certificate holders also reported combining efforts on mitigation options with either State Natural Resource Agencies/Government or University/Extension in the Southeast, Appalachian and Mississippi Alluvial Regions. While these efforts were most prevalent in the Southeast and Appalachian Regions, few of these partnerships existed, overall.

References to products or assistance from a State Natural Resource Agencies/Government were, in almost all cases, situations where the survey respondents simply indicated that they do follow (or are legally required to follow) state forestry Best Management Practices, and that they utilize state BMP surveys (e.g., BMP Monitoring mitigation option) to coordinate improving BMP implementation in relation to Specified Risk Areas. Some certificate holders in the Appalachian Region also indicated that the state requires logger training (e.g., Kentucky). Sometimes, this effort was in coordination with a consultant.

Most mitigation options identified as associated with University/Extension involved distribution of educational materials developed by the University/Extension. Sometimes, this effort was in coordination with a consultant.

For those risks that represent systemic threats, like harvesting of Old Growth Forests and Forest Conversion, additional resources from FSC US and partners could be directed at improving spatial definitions for these risks. For instance, directing additional resources at improved mapping of these areas could help certificate holders better avoid hot spots. This effort could be a component of updating regional mitigation options.

Wildfire is clearly having an impact on landscapes in the Pacific Coast and Rocky Mountain Regions. The impacts of these catastrophic events may also need to be considered in terms of re-evaluating the effectiveness and feasibility of mitigation options.

Key Findings: American Forest Foundation

American Forest Foundation (AFF) collaborated with FSC US to monitor and evaluate the NRA and the associated impacts of Controlled Wood mitigation on family forests. Through this collaboration, AFF developed a framework for monitoring the National Risk Assessment within a pilot geography in the US South.

AFF developed a multi-scale framework to monitor several High Conservation Value (HCV) and Critical Biodiversity (CBA) risk areas, as well as to explore the options for monitoring conversion within the states of South Carolina, Georgia, Florida, and Alabama, including: Late Successional Bottomland Hardwoods; Native Longleaf Pine Ecosystems; Southern Appalachians Critical Biodiversity Area; Florida Panhandle Critical Biodiversity Area; and Forest Conversion. While this project was focused on the US South, the result may be applicable at a coarse scale in other regions.

- Analyses provided valuable baseline data against which future ecological change and mitigation impact can be monitored. Datasets were assessed for ownership, forest type, additional forest conditions, and ancillary data. Considering the rate at which mitigation efforts may affect measurable

change and the cycles of data renewal in datasets used, AFF recommends monitoring ownership, habitat, and forest area metrics within risk areas once every 2-5 years.

- Monitoring for forest conversion proves challenging primarily because it is difficult to draw a correlation between losses in forest area to sourcing by the forest industry. AFF recommends employing a “zoned” approach to isolate areas where sourcing pressure may be higher. Within areas of high sourcing pressure, metrics such as total forest area, distribution of forest types, and ownership patterns may be monitored.
- Monitoring for changes within HCVs and CBAs also creates challenges, particularly regarding the difficulty of characterizing specific risk areas using available data. Utilizing multiple data sources and cross-referencing results can help strengthen future monitoring assessments in light of these challenges.
- Surveys and consultations undertaken in AFF’s analyses provided valuable information regarding outreach and education efforts being implemented and their reception by landowners. Survey results indicate that landowners in the geography are at least occasionally receiving varied types of outreach and educational materials. The landowners and professionals in the survey were slightly more likely than not to respond to the outreach materials. There appeared to be a roughly 50/50 likelihood that the educational materials received would lead to a change in forest management or any other action taken by the landowner. Overall, the response rate to the survey was too low to identify scientifically rigorous evidence supporting any absolute conclusions. Still, it does help to determine a trend among outreach and education efforts in the region: the types of outreach and education materials that certificate holders are utilizing as mitigation may not consistently reach landowners or lead to the mitigation impacts intended by the NRA.
- In addition to the survey results, AFF gained valuable insight from direct consultations with conservation organizations and certification bodies. Feedback reflected much of what is already known around education and outreach efforts to family landowners: landowners are rarely moved to action following one outreach attempt. Change in forest management or landowner behavior occurs after long- term relationship building with a professional. The existing body of knowledge affirms that a landowner typically requires many steps and varying levels of support and engagement on the path to taking conservation action on their land. Therefore, additional mitigation efforts may be needed for substantive risk reduction within these specified areas.

Conclusion & Next Steps

Monitoring provided excellent information on implementation and baselining ecological/ stakeholder feedback. While most certificate holders chose Education and Outreach as their mitigation option, these efforts were generally of high caliber and likely reached a broad audience of forest products supply chain participants.

Insights from this monitoring period informed the 2022 Controlled Wood Regional meetings and will be leveraged for the upcoming update to the US NRA (scheduled for 2024).

An essential component of moving this monitoring program forward will be determining monitoring frequency. FSC US will work with our monitoring partners to draft an appropriate approach. As a starting point, re- collection of this period’s ecological monitoring data should not be completed until 2026, since ecosystem change is a long-term process. During this interim period, FSC US should immediately begin searching for or developing data sources and data models that meet our unique monitoring needs. Conversely, surveys of certificate holders (implementation monitoring) and stakeholders (effectiveness monitoring) should be completed on shorter intervals (e.g., every two years).