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RESEARCH STUDY: NORTH AMERICAN FOREST SECTOR

Final Report
Prepared for the Dutch Biomass
Certification Foundation

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All photos were taken by Elizabeth Woodworth while on site with family forest owners the week of June 5-9, 2017.

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Executive Summary

The Dutch Biomass Certification Foundation (DBC) seeks to promote and increase certification among small forest owners (defined as smaller than 500 hectares, or 1200 acres) in North America. This effort supports the agreed-upon goal in the Biomass Covenant to reach 100% Forest Stewardship Council (FSC) or equivalent certification for woody biomass used for bioenergy generation by 2023 at latest. This report, conducted and authored by Wood & Co. Consulting (Wood & Co.), is the second of two reports commissioned by the DBC to support the implementation of a DBC Stimulation Program (SP).

The findings and data in this report build on the conclusions of a scoping study released in July 2016, authored by Jinke van Dam and Enclude Consultancies (JVD/Enclude report), for which the objective was to define “the bottlenecks, drivers, intervention options and conditions for stimulating SFM certification of small forest owners in Northern America” and “to set the framework for the development of [the DBC] Support program.”

The JVD/Enclude report, using both primary and secondary resources to better understand the landscape in the U.S. and Canada, provides information from an industry point of view and a topline view of the ownership characteristics of the forest sector. Based on the findings of JVD/Enclude’s initial report, preliminary recommendations for the program were provided, including (excerpt taken directly from JVD/Enclude report):

- The package of interventions should be tailor-made for the working region.
- It is important to develop the program with other established and respected partners, both on strategic and on regional level.
- The program should not be prescriptive to a forest owner about which certification system to work with in a region, but use instead a set of criteria to define which certification system(s) are most appropriate for the region.

- It would be beneficial to work with the major certification systems as key partners in the program on a strategic level to stimulate certification. However, they should not determine the program itself.
- For an effective set-up of the program, it is important to focus on the low hanging fruit; the larger sized forest owners, located within a certain radius of a pellet mill, showing a certain level of commitment to engage into certification.
- Project development should take place in a consortium set-up; key partners include the pellet mill, a certification system and a partner that has the local expertise and networks in house.

The requirements under the Dutch Energy Agreement imply that up to 3.5 million metric tons of pellets per year will need to be made of wood biomass that has come from certified forests. The challenge, as outlined in the JVD/Enclude report, is that most of the working forests in the U.S. are owned by the small landowner, and to date, there is no tangible benefit to undergoing the annual preparation process, administrative burden and financial cost of certification. Added to that, there is a strong sense of pride in forest management and an intense value around privacy among many landowners. As such, there is little interest in opening up their private land to scrutiny.

The first section of this report, **Section I: Recommendations for DBC Stimulation Program**, provides informal but detailed proposals submitted directly by organizations that either have programs on the ground and in process, or have a proven record of success and are proposing bespoke programs for collaboration with the DBC. These initial proposals are the direct result of the interviews of forest sector stakeholders found in Section II. The proposals in Chapter 1 serve as a sampling of the types of partnerships and collaborations the DBC could implement immediately, upon formal launch of the SP. The section also proposes a path to implementation, both in the short and long terms, in Chapters 2, 3 and 4.

The second section of this report, **Section II: Primary and Secondary Data Research to Substantiate Recommendations in Section 1**, provides summaries of primary research interviews with both family forest owners (FFOs) and key forest sector stakeholders. Section II also includes summary data from secondary research, using recently published data from the U.S. Forest Service National Woodland Owner Survey (NWOS) and the American Forest Foundation (AFF). Data found in secondary sources corroborate findings from the primary research interviews.

FFO INTERVIEWS

Eighteen family forest owners were interviewed for the purposes of this report. The interviewees love their land and are intensely connected to it. Keeping their land forested and keeping it in the family are their top priorities. The priorities mentioned by the interviewees were in line with the secondary research from the NWOS and AFF survey:

- Wildlife management
- Recreation
- Keeping the forest forested
- Creating a family legacy/keeping it in the family

Many FFOs interviewed do manage for timber and pulpwood, but they manage for the above benefits and goals as well. Although many landowners were suspicious of government regulation and weary of rules and requirements with regard to their land, many interviewees said they would consider certification if not too onerous or restrictive and the benefits were clear. When open to certification, the primary certification that interviewees would consider is American Tree Farm System (ATFS), which is designed specifically for FFOs.

FOREST SECTOR INTERVIEWS

Forest sector stakeholders interviewed emphasized the challenges around forest management certification of FFOs, citing landowner priorities, costs, administrative burden, etc. It was stressed that indicators beyond forest management (FM) certification should be considered. Furthermore, many forest sector representatives maintained that it would be a significant mistake (and potentially fatal to the SP) to not recognize ATFS, a 75-year-old program that has reached millions of landowners, representing millions of acres. In addition, without exception, those interviewed who have experience with FFOs see little hope of success in any program that tries to certify individual landowners one by one.



Introduction and Methodology

This report and the data and information herein are the distillation of both primary and secondary research that was conducted between March 20 and June 9, 2017.

Because the majority of wood biomass pellets currently exported to Europe come from the U.S. southeast, this region was a focus point for the research conducted, although some data can be extrapolated and conclusions can be applied elsewhere. The family forest owners interviewed and included in this study are all located in the southeastern U.S. There are a few interviews with Canadian representatives from the forest sector, but the majority of the data, findings and conclusions relate to the U.S.

In order to avoid duplication and build on the foundation and framework of the JVD/Enclude report, this project does not delve into the resources used in the first report, and has intentionally taken a three-pronged approach to the research, in order to investigate the opportunities available to the DBC on a more detailed level.

1. First, the report seeks to either provide insight into several programs that are already underway to stimulate forest management certification among small landowners, or describe programs proposed by organizations that are already working towards goals in common with the DBC. The proposals found herein are administered by five organizations: American Forest Foundation (AFF), Sustainable Forestry Initiative (SFI), Forest Stewardship Council (FSC), Rainforest Alliance (RA) and Environmental Incentives (EI). The report then outlines recommended actions for successful SP implementation over the course of two and a half years.
2. Secondly, through an extensive effort to conduct one-on-one interviews, including 35 in-person meetings and phone calls, the report summarizes the perspectives of FFOs and key stakeholders within the forest sector.
3. And lastly, the report provides detailed insight into secondary data obtained by the National Woodland Owner Survey of the U.S. Forest Service Forest Inventory and Analysis Program and the American Forest Foundation's survey of family forest owners (FFOs), among other sources. This data largely corroborates the insight gleaned from in-person interviews.



SECTION I

Recommendations for DBC
Stimulation Program

Chapter 1: Identification of Existing Program Opportunities

Programs that are either already underway or part of an already established (and funded) organization

Several certification stimulation initiatives or programs that either exist already, or are part of well-established organizations, could be early investments for DBC. These would require varying amounts of investments. Though a North American DBC Manager would be the primary contact for each program, DBC investment also would likely support the funding of consulting foresters to manage each project individually, along with other costs (certification fees, audit fees, administration, etc.). The following organizations — AFF, SFI, FSC, RA and EI — have individually submitted initial proposals as a direct result of interviews with representatives in those organizations (summaries of which are found in Chapter 6). With the exception of the USFS Forest Stewardship Program, the proposals included in this chapter are each crafted with a partnership with the DBC Stimulation Program in mind and could begin relatively soon. The USFS FSP is a program that could be of use as a tool to achieve either ATFS or FSC certification.

- I. American Forest Foundation (AFF)/American Tree Farm System (ATFS)
- II. Sustainable Forestry Initiative (SFI) Forest Partners Program
- III. Forest Stewardship Council (FSC)
- IV. Rainforest Alliance (RA)
- V. Environmental Incentives (EI)
- VI. U.S. Forest Service Forest Stewardship Program (FSP)

A NOTE ABOUT PEFC

According to the Verification Protocol for Sustainable Solid Biomass commissioned by the Dutch Ministry of Economic Affairs, biomass coming from forests certified to either FSC or PEFC will comply with the SDE+ Sustainability Requirement Principles 2-13. The Programme for the Endorsement of Forest Certification (PEFC) is a global alliance of national forest certification systems: 49 national members and 39 endorsed national certification systems.

- More than 740 million acres/300 million hectares of forests, two-thirds of all certified forests globally, are certified to PEFC's internationally recognized Sustainability Benchmarks.
- PEFC supplies more than 18,000 Chain of Custody certified companies with responsibly sourced timber and wood-based products.
- PEFC was founded by small and family forest owners to demonstrate excellence in sustainable forest management.

PEFC US:

- PEFC US includes two certification programs: The Sustainable Forestry Initiative® Inc. (SFI) and the American Tree Farm System® (ATFS), **which together make up approximately 125 million hectares of certified lands across North America**, including land certified to the SFI standard in Canada. PEFC first endorsed the SFI standard in 2005 and the ATFS standard in 2008. PEFC has also endorsed the Canadian Standards Association (CSA).
- Based on joint research, PEFC and FSC concluded that **at the end of 2016, almost 69 million hectares (or 16%) of global forest area are double certified, and the total global certified area (at least one of either FSC or PEFC) is 429 million hectares**. Double certification exists currently in 28 countries.

For more information, please visit www.pefc.org.



I. AMERICAN FOREST FOUNDATION



The American Forest Foundation (AFF) is a conservation organization that works with family forest owners, teachers and elected officials to promote forest stewardship and protect the health and future of forests. AFF works especially closely with the 74,000 members of the American Tree Farm System® (ATFS), who sustainably manage more than 20.5 million acres of certified forests.

ATFS is a sustainable forest management certification, created in 1941, which was designed specifically for small, private landowners. The ATFS standard can be found in Appendix I. The standard is reviewed and revised through a detailed process, including public consultation, every five years. The new 2015-2020 ATFS Standards of Sustainability were approved by AFF's Board of Trustees on November 11, 2014, and enacted January 1, 2015. Fiber certified to ATFS is recognized by PEFC, and is exported internationally.

Reasons why FFOs choose to certify to ATFS (Source: AFF)

- 1. RECOGNITION:** ATFS recognizes FFO stewardship both on the personal, individual level, as well as publicly. The Tree Farm sign is a public symbol that signals to the community and beyond that the forest owners are committed to conservation. For many, it is also a symbol of personal achievement. The famous, recognizable sign and these associated benefits are a huge draw for the program.
- 2. VALIDATION/CONFIDENCE:** ATFS programming and the certification process validates that landowners are doing right by their land and gives them the confidence to deepen their conservation practice. It also provides validation that the professionals they work with (foresters, consultants, etc.) are doing good work and gives them confidence in those contractors.
- 3. STANDARDS:** Unlike other forest management standards, which may have indicators for FFOs derived from an industrial or global standard, the ATFS standards are specifically for the size, scale and intensity of family owned woodlands in the U.S. This means they match and best support their motivations, operations, etc. The standards are also designed to provide a framework/approach that guides them through sustainable forest management (SFM) in a way that is most appropriate for them.
- 4. TECHNICAL SUPPORT:** Unlike other systems, ATFS is much more than pure certification. It pairs certification with ongoing technical support of a trusted practitioner (forester). The programming ensures a sustained relationship and support.
- 5. ONGOING TOOLS:** In addition to the technical support, ATFS has an ongoing calendar of local field events and demonstrations and workshops and there are also topic-specific online webinars, email and paper newsletters, and other publications and programming that provide landowners with continued support and education.
- 6. COMMUNITY:** By joining ATFS, landowners enter a community, where they can interact and learn from other landowners and a group of professionals. This community is unique to the culture and institution of ATFS. They also gain access to communications and marketing tools with the ATFS program.



IDEAS FOR COLLABORATION BETWEEN THE AMERICAN FOREST FOUNDATION AND THE DUTCH BIOMASS CERTIFICATION FOUNDATION STIMULATION PROGRAM (DBC)

There are four distinct project ideas that AFF could implement that would help DBC meet its objectives. They are outlined below. In addition, as part of this proposal, AFF has combined these four ideas into fifth and sixth options that integrate all of the separate ideas into one project.

PROJECTIONS FOR AFF PROGRAMS TODAY

WITHOUT EXPECTED INVESTMENT FROM DBC

Generally, half a million new certified acres added nationally, annually, without financial investment for growth initiatives from DBC (or others).

IMPACT OF DBC INVESTMENT IN THE AMOUNT REQUESTED

Although it is hard to project specific growth figures outside of a specific project, financial support and partnerships with committed stakeholders (such as the DBC) have consistently accelerated the rate of certification among FFOs.





SUPPORT OF AN INDEPENDENTLY MANAGED GROUP (IMG)

DESCRIPTION:

DBC and AFF would work with an existing pellet mill to:

- Set up and manage an IMG. Read more about IMGs and see a list of current IMGs [here](#).
- Conduct outreach to landowners in market-specific woodbasket to recruit them into the IMG.
- Coordinate follow-up with landowners to move them along the certification process as quickly as possible.

SCOPE AND CONDITIONS

This is a turnkey project that would target the specific woodbasket of an individual pellet mill. The mill would have to be willing to take on the additional administrative requirements of the IMG. Outreach would occur to several thousand landowners owning a combined million acres or more of land.

TIMING

This project could launch immediately, eliminating the need to establish a new IMG, via partnership with a mill or producer that already has an IMG in place. It would take 3-6 months to bring on additional capacity to support the IMG expansion and execute initial marketing. The project itself would run for 12-24 months in the initial phase, before being evaluated. Minimum funding period is 2 years.

PARTICIPANTS AND ROLES

- AFF to hire and coordinate staff/consultants to implement landowner outreach and follow up.
- The pellet mill to maintain and manage the administrative structures of the IMG.

DBC INVESTMENT NEEDED

(ESTIMATED, ASSUMING THIS IS A STANDALONE PROJECT)

- ANNUAL COST: \$165,000
 - Project oversight (staff): \$10,000
 - Project management (staff): 1 FTE: \$70,000
- Staff/consultant forester engagement for landowner follow-up/management plan preparation/inspections: \$50,000
- Landowner marketing and outreach: \$30,000
- Staff travel: \$5,000

TOTAL PROGRAM COST

\$165,000/year

PLUS THE AUDIT COSTS, WHICH
WOULD BE ASSUMED BY THE PELLET
PRODUCER.

ANALOGOUS PROGRAMS ALREADY UNDERWAY

There are 17 active IMGs operated by different groups around the country. AFF has contracted with industry partners to establish IMGs in the past but has not worked closely with IMG managers to specifically promote and grow their existing IMGs in a sustained manner.

POTENTIAL FOR LEVERAGE

The pellet producer would most likely take on the additional audit costs to establish or grow their IMG. Also, depending on the woodbasket and the terms of the IMG's landowner agreement, it is possible other forest product companies would consider investing in the project.



DEVELOPMENT AND/OR IMPLEMENTATION OF A LANDSCAPE MANAGEMENT PLAN (LMP)

DESCRIPTION:

DBC would invest in the capacity needed for AFF to develop a landscape management plan (LMP), and recruit landowners to participate in certification through the plan.

SCOPE AND CONDITIONS

Project would develop a forest management plan for a landscape of multiple family forest owners from which pellet producers source. The project would focus on implementing the Florida Panhandle Landscape Management Plan, which has already been developed, OR on developing a new landscape management plan for another region (e.g., also in a wood pellet producer sourcing area). It would be implemented where one or more group certificate holders (an IMG + state program) is present to provide certification, or offer multiple pathways to certification.

The LMP would cover multiple counties and many millions of acres, significantly reducing the barriers to certification for landowners within that region. Nonetheless, landowner outreach must still be conducted to recruit landowners to participate.

TIMING

If the Florida panhandle were selected, AFF could launch implementation immediately (i.e., second half 2017). If another landscape were chosen, AFF would need 12-18 months to develop the plan before implementation (i.e., Q1 2019). Once implementation begins, AFF needs 18-24 months to market to landowners and coordinate follow-up. At that point AFF would assess progress and determine whether further investment is needed/warranted.

Minimum funding period is two years if using Florida Panhandle Plan; three years if developing new plan for new region.

DBC INVESTMENT NEEDED

(ESTIMATED, ASSUMING THIS IS A STANDALONE PROJECT)

- YEAR ONE COSTS (if other than Florida): \$75,000
 - Staff to oversee LMP development (if needed): \$20,000
 - Landscape management plan development (if needed): \$50,000
 - Staff travel: \$5,000
- ANNUAL COSTS AFTER PLAN IS DEVELOPED:
 - Project oversight (staff): \$20,000
 - Project management (staff): 1 FTE @ \$70,000
 - Staff/consultant forester engagement for landowner follow-up/management plan preparation/inspections: \$50,000
 - Forester training in LMP implementation: \$7,500
 - Landowner marketing and outreach: \$30,000
 - Support for state ATFS program to accommodate ongoing administrative burden of additional participating landowners: \$10,000
 - Staff travel: \$5,000

ANALOGOUS PROGRAMS ALREADY UNDERWAY

The Florida LMP is the first project of its kind in the world.

PARTICIPANTS AND ROLES

- AFF would hire and coordinate staff/consultants to:
 - Design LMP, if needed
 - Implement landowner outreach and follow-up
- Local pellet facilities, other forest products companies, consulting foresters and state agency foresters would participate in training on the use of the LMP, and begin to use it in their own landowner outreach.

TOTAL PROGRAM COST



POTENTIAL FOR LEVERAGE

It is possible to combine this with additional project ideas to generate more leverage opportunities. As a standalone project, depending on the woodbasket, AFF could pursue other forest product companies as co-investors.



DBC AND AFF FACILITATE THE LAUNCH OF LANDSCAPE PARTNERSHIPS IN COLLABORATION WITH PELLET PRODUCERS

DESCRIPTION:

DBC and AFF would work within the parameters of AFF's pre-existing agreement with the National Fish and Wildlife Foundation (NFWF) to bring pellet producers into agreements to support AFF/NFWF's landscape conservation projects throughout the south. AFF and NFWF would agree to expand certification goals in each of their projects. The result would be several landscape-scale projects of the kind recently announced by Drax (in Southern Arkansas) and 3M/IP/P&G (in the Coastal Carolinas). See Appendix 3 for press releases describing these projects.

SCOPE AND CONDITIONS

Projects would be limited to the 11 landscapes identified by AFF/NFWF (all within range of pellet producing mills). Projects may be further limited by pre-existing arrangements with other partners. Assuming no limitations, this project would involve marketing to 379,000 landowners across those 11 landscapes, who collectively own 31 million acres. A primary goal of these projects is the creation/maintenance/enhancement of habitat for at-risk species, which is paired with certification. **Certification is completely consistent with the biodiversity goal and could be easily expanded within these projects, but will not be the only goal.**

TIMING

The 11 landscape projects launch in three waves: Four in the summer of 2017 (SW Alabama, North Alabama, Florida Panhandle, Tennessee Cumberland Plateau); four in the summer of 2018 (Southern Arkansas, Coastal North Carolina, Coastal South Carolina, Southwest Georgia); and three in the summer of 2019 (Piney Woods Mississippi, Southeast Alabama, Southeast Georgia). Each project lasts for five years. Initial agreements with DBC/pellet producers would ask them to sponsor the first two years of relevant projects. Minimum investment is two years.

DBC INVESTMENT NEEDED

(ESTIMATED, ASSUMING THIS IS A STANDALONE PROJECT)

- ANNUAL COST
 - Matching funds to incentivize pellet producer investment: \$200,000

ANALOGOUS PROGRAMS ALREADY UNDERWAY

AFF has 15 landscape-scale projects across the country working to engage landowners in a variety of values. They have all had varying levels of success. Analysis of our longest-running project indicates that our engagement efforts resulted in landowners who were *nine times* more likely to take action than landowners in a control group who were not targeted by the engagement effort.

PARTICIPANTS AND ROLES

- AFF and NFWF are responsible for raising funds from a variety of partners and regranting those funds to a local partner through a competitive RFP process.
- The local partner implements the landowner outreach and coordinated follow-up.
- AFF provides guidance and technical assistance
- DBC provides matching funding to encourage pellet producer participation.
- Pellet producers commit to supporting relevant projects.

TOTAL PROGRAM COST

\$11 million

- NFWF: \$4 MILLION (ALREADY COMMITTED)
- AFF: \$3 MILLION (ALREADY COMMITTED)
- DBC: \$400,000 (ASSUMING TWO-YEAR INVESTMENT BY DBC)
- PELLET PRODUCERS: \$400,000 (\$200,000 ALREADY RAISED)
- OTHER FOREST PRODUCT COMPANIES: \$1.2 MILLION (\$410,000 ALREADY RAISED)
- CONSERVATION PHILANTHROPY: \$2 MILLION (\$27,500 ALREADY RAISED)

POTENTIAL FOR LEVERAGE

DBC's investment here will be matched several times over.



DBC AND AFF FACILITATE THE CREATION OF PAY-FOR-PERFORMANCE SYSTEMS TO INCENTIVIZE INCREASED CERTIFICATION BY ATFS STATE COMMITTEES

DESCRIPTION:

While the current funding system supporting ATFS state programs supports expansion of the system, there is an opportunity to modify this approach to more effectively incentivize and bolster growth of the certification footprint through the states. In addition, the current financial system does not directly target certification in areas where certification is most relevant to the marketplace. In this project, AFF and DBC will work together to develop and pilot pay-for-performance mechanisms that change the incentive structures for ATFS state committees relative to certification expansion. The appeal of this approach is that, if successful, it would create a sustainable model for the gradual expansion of certification that could accommodate investments from a wide range of industries.

The basic premise is that, instead of the current baseline program funding system, **AFF would establish contracting and monitoring mechanisms with state committees that would provide them funds based on a) the number of new acres certified within a given geography; and b) the number of acres maintained in certification within a given geography.** Once the contracting and monitoring mechanisms were established, AFF could then recruit other industry players to participate in the marketplace for certification, potentially facilitating certification as a profit center for ATFS state committees. This would support local innovation in growing certification, rather than relying on top-down approaches, and target certification in the most critical geographies.

SCOPE AND CONDITIONS

Projects could occur within any ATFS state. AFF would target areas of relevance to DBC partners.

TIMING

AFF would need 6-12 months to design contracting and monitoring mechanisms, engage state committees and, potentially, recruit additional industry participants. AFF would then want to allow states between 12 and 36 months to implement strategies in order to take advantage of pay-for-performance schemes before evaluating project results. Minimum investment is two years.

PARTICIPANTS AND ROLES

- AFF works with ATFS state committees to design pay-for-performance systems and mechanisms.
- AFF recruits certification customers to the marketplace, to pledge payments in exchange for new acres and maintained acres.
- AFF monitors and reports on progress on behalf of companies.
- ATFS committees design and implement projects to provide certification value.
- DBC provides funding to set up systems.
- DBC is an initial purchaser of value provided, and perhaps provides matching funds to help pellet producers (and others?) participate in the market. In other words, DBC subsidizes the initial “purchase” of certification in order to jumpstart the market.



CONT.

DBC AND AFF FACILITATE THE CREATION OF PAY-FOR-PERFORMANCE SYSTEMS TO INCENTIVIZE INCREASED CERTIFICATION BY ATFS STATE COMMITTEES

DBC INVESTMENT NEEDED

(ESTIMATED, ASSUMING THIS IS A STANDALONE PROJECT)

- INITIAL YEAR PROGRAM COST: \$140,000
 - Project oversight (staff): \$20,000
 - Project management staff: ½ FTE @ \$35,000
 - Legal/market consultants to help set up contract/monitoring mechanisms: \$50,000
 - Staff travel: \$5,000
 - Regional convening of ATFS leadership to discuss/design at two regional meetings: \$30,000
- ANNUAL PROGRAM COST (Year 2 and beyond): \$195,000
 - Project oversight (staff): \$20,000
 - Project management (staff): 1 FTE @ \$70,000
 - Staff travel to recruit ATFS committees: \$5,000
 - DBC commitment to subsidize initial markets: \$100,000

TOTAL PROGRAM COST

>\$500,000

(ESTIMATED) FOR FIRST THREE YEARS

LIKELY TO BE HIGHER,
ASSUMING AFF CAN GET OTHER
MARKETPLACE ACTORS TO INVEST.

ANALOGOUS PROGRAMS
ALREADY UNDERWAY

AFF is piloting a pay-for-performance scheme around hazardous fuels reduction in Colorado. The project is just underway. It has received a great deal of attention/investment.

POTENTIAL FOR LEVERAGE

Initially, DBC would be carrying the cost of this by itself. In a few months, AFF would bring on additional partners/“customers” for certification.

COMBINING PROJECTS

The greatest impact, leverage and cost-efficiency for DBC comes in combining all of the above approaches in a single project, targeted either at one landscape or regionally. This approach would bring all the various tools to bear and would benefit from economies of scale because AFF would be using the same resources in management, administration, marketing and landowner coordination to promote multiple projects at the same time.



COMBINING ABOVE PROJECT IDEAS IN ONE LANDSCAPE: FLORIDA PANHANDLE

DESCRIPTION:

AFF combines the above four project ideas in the Florida Panhandle:

- Idea 1 – AFF uses an already-existing IMG.
- Idea 2 – AFF uses the existing Florida Landscape Management Plan.
- Idea 3 – DBC expands on existing investment in the Florida landscape collaborative.
- Idea 4 – AFF pilots a pay-for-performance program within the overall landscape program.

SCOPE AND CONDITIONS

AFF would target a woodbasket around a mill that has an IMG already in place.

TIMING

The Florida panhandle project launches in summer of this year and runs through 2022. AFF would ask DBC to provide a minimum of two years of funding, and consider reinvesting based on program progress.

PARTICIPANTS AND ROLES

- Same as outlined above in individual project ideas. Additionally, AFF coordinates the various projects so they sync together.

DBC INVESTMENT NEEDED

(ESTIMATED, ASSUMING THIS IS A STANDALONE PROJECT)

- YEAR ONE COST: \$260,000
 - Project oversight (staff): \$20,000
 - Project management (staff) dedicated to Florida: \$70,000
 - Staff travel: \$10,000
 - Forester training in LMP implementation: \$10,000
 - Legal/market consultants to help set up contract/monitoring mechanisms: \$50,000
 - DBC expansion of investment in landscape project (which includes landowner outreach and engagement, and accomplishment of conservation objectives): \$50,000
 - Staff/consultant forester engagement for landowner follow-up/management plan preparation/inspections: \$50,000 – *Note this is an optional cost. It is possible that LMP adoption will be sufficient merely through training existing foresters on the use of the LMP.*

DBC INVESTMENT NEEDED
(ESTIMATED, ASSUMING THIS IS A STANDALONE PROJECT)

- YEAR TWO COST: \$260,000
 - DBC commitment to subsidize initial pay-for-performance markets: \$50,000
 - Project oversight (staff): \$20,000
 - Project management (staff) dedicated to Florida: \$70,000
 - Staff travel: \$10,000
 - DBC expansion of investment in landscape project (which includes landowner outreach and engagement, and accomplishment of conservation objectives): \$50,000
 - Staff/consultant forester engagement for landowner follow-up/management plan preparation/inspections: \$50,000 – *Note this is an optional cost. It is possible that LMP adoption will be sufficient merely through training existing foresters on the use of the LMP.*
 - Forester trainings in LMP implementation: \$10,000

TOTAL PROGRAM COST

\$1.32 million

- **NFWF: \$300,000**
- **AFF: \$250,000**
- **ADDITIONAL INVESTOR: \$100,000 PLUS THEIR COSTS IN MANAGING IMG (NOT INCLUDED)**
- **DBC: \$520,000 (ASSUMING TWO-YEAR INVESTMENT)**
- **OTHER FP COMPANIES OR CONSERVATION FOUNDATIONS: \$150,000**

POTENTIAL FOR LEVERAGE

DBC would essentially pay for ~40% of the project with the other half coming from a variety of sources, most of which have already committed funds. This allows DBC to utilize existing program architecture to achieve its goals.



COMBINING ABOVE PROJECT IDEAS ACROSS THE SOUTH

DESCRIPTION:

AFF combines the above four project ideas across the U.S. South, providing maximum leverage and impact:

- Idea 1 – Where relevant, AFF uses existing IMGs. Where needed, AFF works with companies to set up new IMGs.
- Idea 2 – AFF uses the existing Florida Landscape Management Plan, and develops five additional plans in priority landscapes.
- Idea 3 – DBC incentivizes pellet producers to invest in relevant AFF/NFWF landscape programs.
- Idea 4 – Within and outside of landscape programs, AFF creates pay-for-performance systems. This allows coverage in areas that are outside of AFF/NFWF's conservation landscapes.

SCOPE AND CONDITIONS

Through the above approaches, and assuming the participation of pellet producers, AFF would be able to target literally every woodbasket of interest to DBC.

TIMING

This is a massive project and would take 6-7 years to fully implement. AFF would use the basic schedule of the conservation landscape projects to roll this out. AFF would ask DBC to commit to three years of investment.

PARTICIPANTS AND ROLES

- Same as outlined above in individual project ideas. Additionally, AFF coordinates the various projects so they sync together.

DBC INVESTMENT NEEDED

(ESTIMATED, ASSUMING THIS IS A STANDALONE PROJECT)

- YEAR ONE COST: \$350,000
 - Project oversight (staff): \$20,000
 - Project manager (staff): 1 FTE @ \$70,000
 - Legal/market consultants to help set up contract/monitoring mechanisms for pay-for-performance: \$50,000
 - Staff travel: \$10,000
 - Matching funds to incentivize/reward pellet producer investment: \$70,000
 - Money to hire consultant foresters for landowner follow-up/management plan preparation/inspections where necessary to supplement existing efforts and speed adoption: \$50,000
 - Landscape management plan development: \$40,000 (assuming AFF develops one new plan each year)
 - Forester training in LMP implementation: \$10,000
 - Regional convening of ATFS leadership to discuss/design at two regional meetings: \$30,000

DBC INVESTMENT NEEDED
(ESTIMATED, ASSUMING THIS IS A STANDALONE PROJECT)

- YEAR TWO COST: \$320,000
 - Project oversight (staff): \$20,000
 - Project manager (staff): 1 FTE @ \$70,000
 - Staff travel: \$10,000
 - Matching funds to incentivize/reward pellet producer investment: \$70,000
 - Money to hire consultant foresters for landowner follow-up/management plan preparation/inspections where necessary to supplement existing efforts and speed adoption: \$50,000
 - Landscape management plan development: \$40,000 (assuming AFF develops one new plan each year)
 - Forester training in LMP implementation: \$10,000
 - DBC commitment to subsidize pay-for-performance markets: \$50,000

POTENTIAL FOR LEVERAGE

DBC would essentially pay for ~40% of the project with the other half coming from a variety of sources, most of which have already committed funds. This allows DBC to utilize existing program architecture to achieve its goals.

TOTAL PROGRAM COST

\$11.8 million

- **NFWF: \$4 MILLION** (ALREADY COMMITTED)
- **AFF: \$3 MILLION** (ALREADY COMMITTED)
- **DBC: \$990,000** (ASSUMING THREE-YEAR COMMITMENT)
- **PELLET PRODUCERS: \$410,000** (\$200,000 ALREADY RAISED) PLUS COSTS TO ADMINISTER IMGS (NOT INCLUDED)
- **OTHER FP COMPANIES/ CONSERVATION INVESTORS: \$1.2 MILLION** (\$410,000 ALREADY RAISED)
- **CONSERVATION PHILANTHROPY: \$2.2 MILLION** (\$27,500 ALREADY RAISED)



II. SUSTAINABLE FORESTRY INITIATIVE (SFI)



The Sustainable Forestry Initiative® Inc. (SFI) is an independent, non-profit organization dedicated to promoting sustainable forest management. SFI develops and oversees standards for forest management and the forest products supply chain. SFI is endorsed by PEFC. SFI Inc. is governed by the SFI Board, which sets SFI's strategic direction and is responsible for overseeing and improving the SFI Program and SFI standards. The Board's three chambers represent environmental, social and economic sectors equally.

GENERAL DESCRIPTION

SFI operates the current SFI Forest Partners® Program (FPP) in partnership with Time Inc., National Geographic Society, Macmillan Publishers and Pearson Education, with additional support from Hearst Enterprises. FPP encourages U.S. forest landowners to certify their forestland to the SFI Forest Management Standard. By collaborating on shared objectives and linking market leaders directly to stakeholder groups, SFI and our Forest Partners are working together to strengthen forest practices and procurement through coordinated projects and group certification opportunities. The goal has been to certify 10 million acres of uncertified forestlands to the [SFI Forest Management Standard](#) by the end of 2017, beginning in the southeast U.S.

Beginning in 2018, SFI will expand the program to include the U.S. and Canada with new goals reaching to the year 2020 and beyond. **SFI is currently seeking Partners to share in the effort to increase and improve sustainable forest management and wood procurement practices across the landscape.** The Program will follow opportunity, but pursue effectiveness. This means pursuing the right opportunities in the U.S. and Canada under the broad banner of certification. Collaboration with our Partners will capitalize on forest-based conservation and community initiatives that demonstrate and enhance our shared quality of life while providing supply chain assurances through standards, data and authentication.

To the extent the SFI Forest Partners Program can target efforts in geographic areas that will more likely have a positive impact on the Partners' supply chains and areas of influence, the Program will pursue opportunities for certification in key regions aimed at key products. **For example, in the U.S. South, particularly along coastal border states with international ports, where biomass and fuel pellet production can best support international markets.**

OBJECTIVES

Objectives include the development of innovative approaches to group and coordinated certification for smaller and medium-sized mills and medium- to large-forest ownerships, seeking opportunities for collaboration, cost effectiveness, and incentives for certification in the U.S.

The SFI standards provide for multi-site and group certification options under the following circumstances:

- A Multi-Site Organization has an identified central function (referred to as a central office – but not necessarily the headquarters of the organization) at which certain activities are planned, controlled or managed and a network of local offices or branches (sites) at which such activities are fully or partially carried out.
- A Group Certification Organization is a specific type of multi-site organization where forest owners, forest owners' organizations, forest managers, forest products manufacturers or forest products distributors without a pre-existing legal or contractual link can form a group for the purposes of achieving certification and gaining eligibility for a sampling approach to certification audits.

REQUIREMENTS FOR PARTICIPANTS

Through the SFI Forest Partners Program, SFI proposes that Groups be formed under willing forestry consulting firms as the certificate holder (i.e., serving as the central function). Forest landowners can voluntarily join a Group as long as they meet the requirements for forest management set forth in the standard. Third-party auditing will be conducted according to the SFI standard auditing procedures. Participating forest landowners must meet all applicable requirements of the SFI Forest Management Standard and agree to be subject to an initial third-party certification audit, annual surveillance audits and recertification audits by accredited certification bodies.

SCOPE OF THE PROJECT

The SFI Forest Partners Program scope is focused on forest owners of all sizes, both public and private, in the United States and Canada. The project for Group establishment will include small forest owners (smaller than 500 hectares, or 1200 acres) in the United States and Canada. A minimum of two forest owners is required to form a group. The maximum number of forest owners in a group is not limited by the SFI standards, but should be limited to a reasonable number to not exceed the management capacity of the central function. No maximum acreage limit exists under the SFI standards.

TIMING

The SFI Forest Partners Program is currently underway. **Therefore, a project for forming a Group could potentially begin immediately and extend to 2020.** Typically, a Group certification may take 6-10 months through a process of assessment, program set-up and training, to culminate with a certification audit and certificate receipt. Under this proposal, multiple Groups can be established simultaneously.

PARTICIPANTS AND ROLES

Using funds from Partners of the SFI Forest Partners Program, SFI staff will contract with forestry consultants (or consulting organizations) to recruit their current and potential forest landowner clients within a state or multiple state area, or provincial area, to join in a SFI certification Group. SFI staff will administer program benefits for Group start-up which will include cost support for gap assessments, evidence manual development, coordination, training, audit coordination and audit costs for the initial certification audit. Consultants who take on a central function role will commit to perpetuating the Group certificate into the future. SFI staff will provide expertise on standard interpretation and navigation, identification of accredited third-party certification bodies, and state and provincial contacts. The forestry consulting firms will provide expertise on forest management execution to meet the standard requirements, client recruitment and Group system management.

DBC INVESTMENT NEEDED (US\$)

SFI is seeking a three-year commitment of \$20,000-\$30,000 per year (\$60,000-\$90,000 total) from DBC to share the cost of the Program with other Partners.

TOTAL PROGRAM COST (US\$)

Total cost of the SFI Forest Partners Program through 2020 will be \$250,000.

ANALOGOUS PROGRAMS ALREADY UNDERWAY

In 2010 and 2011, SFI Inc., in partnership with Time Inc., National Geographic Society, Hearst Enterprises, Verso Paper Corp., Sappi Fine Paper North America and NewPage Corporation, embarked on an innovative two-year pilot project in Maine to encourage landowners to certify their lands to the SFI Forest Management Standard. That project resulted in 1.4 million acres/570,000 hectares certified to the SFI 2010-2014 Standard. The Maine project also resulted in 100,000 acres of forest lands certified to the American Tree Farm Standard. Building on that initiative, SFI partnered with market leaders to launch a new program to encourage landowners in other states to certify their lands.

In 2012, Time Inc., National Geographic Society, Macmillan Publishers and Pearson stepped forward and became Founding Partners of the SFI Forest Partners Program currently underway, investing in the future of our forests by making five-year commitments to increase the source of certified forest products through the SFI Forest Partners Program. Hearst Enterprises has also supported the Program annually. Their decision to work directly with the diverse SFI community through the SFI Forest Partners Program has helped bring together forest landowners, manufacturers, customers, conservation groups and government agencies across North America to ensure current and future generations may enjoy the many ecosystem services and forest products provided through responsible forestry.

To date, the current SFI Forest Partners Program has assisted with certification of 6.4 million acres toward the original 10-million-acre goal. Additional prospects currently identified, if certified, will exceed the 10-million-acre goal.

POTENTIAL FOR LEVERAGE

SFI is seeking Partner companies and organizations that have been identified for their potential interest in supporting the SFI Forest Partners Program due to their business focus, environmental aspects, corporate social responsibility statements and goals, affiliations or certification requirements. Potential Partner companies and organizations are assembled into several groups, each with common focal areas to which SFI participation can potentially appeal. For example: Publishers, Human Health/Outdoor Recreation, Retailers, Industry Associations, SFI Program Participants and Emerging Markets.

PROJECTIONS FOR THE SFI FPP TODAY

WITHOUT EXPECTED INVESTMENT FROM DBC

The SFI FPP is currently seeking Partners for the 2018-2020 proposal. The goal is to be able to fund the entire program costs with Partner allocations. However, if a “critical funding mass” is achieved to commit to Phase II, but the Program experiences insufficient funding for complete Program execution, SFI Inc. would obligate itself to take up a reasonable shortfall from the general SFI budget to enable the Program’s success. From a funding perspective, this scenario would cause SFI to have to shift budgeted funds from other beneficial SFI Programs. To date, SFI has received verbal commitments from one customer for full Partnership funding, and from one non-profit organization for year-to-year funding at a minimum support level.

IMPACT OF DBC INVESTMENT IN THE AMOUNT REQUESTED

A three-year commitment for DBC funding could supply one-fourth to one-third of the Program’s expected cost requirements. SFI’s hope is to secure 3-4 Partners like DBC at the top funding level, and to engage other Partners at lower funding levels toward 100% Program funding with a broad support base shared across several forest product sectors.



III. FOREST STEWARDSHIP COUNCIL (FSC)



Forest Stewardship Council United States (FSC US) is the U.S. national office of FSC, an independent, non-profit organization that sets standards under which forests and forest products manufacturers and distributors are certified. Its membership consists of three equally weighted chambers — environmental, economic and social. FSC US is responsible for developing and maintaining the national FSC Forest Stewardship Standard, the Family Forest Standard, and the FSC Controlled Wood national risk assessment. FSC US also performs trademark administration, conducts supply chain and business development, and is responsible for marketing and educating the U.S. public about the importance of forest conservation. FSC US is based in Minneapolis, Minnesota, and also includes staff located in Washington, Colorado and Michigan.

CURRENT PROGRAM

Group certification is the primary vehicle for FSC certification of small- to medium-sized ownerships of woodlands in the United States. It has proven to be a highly effective and cost-efficient means for ensuring high standards management of smaller forest tracts as well as connecting those landowners with discerning buyers of forest products. In many cases, direct certification (audit) costs are born by the group certification manager (e.g., paper or lumber mill, state government agency, university extension service, etc.) in order to remove that barrier to entry.

CONDITIONS FOR PARTICIPATION IN THE PROGRAM

Forest owners of <1000 hectares would need to meet FSC's US Family Forest Stewardship Standard, while ownerships of >1000 hectares would be required to meet FSC's standard US Forest Stewardship Standard.

SCOPE OF THE PROJECT

There is a great deal of flexibility within the program. FSC would propose to work with one or more pellet mills that are major suppliers to the Dutch energy utilities. The geographic scope would be the viable hauling radius around that mill or mills, along with potential connections to other complementary markets for FSC certified timber.

TIMING

An FSC group plan could start immediately, though FSC would add local (U.S. southeastern) representation partly funded by this effort and with investments from other partners. This could happen within three months of project start and would permit acceleration of project management.

PARTICIPANTS AND ROLES

FSC would work directly with one or more U.S. pellet mills, in addition to convening other complementary users of certified wood. In addition to significant direct liaising with partners, FSC would convene workshops and meetings with forest owners, consulting foresters, FOA representatives, certification bodies, pellet mill staff and certified wood purchasers.

TOTAL PROGRAM COST (US\$)

Assuming 2-3 pellet mills under same ownership and inclusive of the costs associated with auditing (by an independent certifying body) and group management (by the pellet mill), FSC would estimate project costs of \$400,000-\$500,000.

DBC INVESTMENT NEEDED

- Assuming (nominal) cooperative investment by pellet mills, the requested investment by DBC would be \$350,000-\$450,000.

ANALOGOUS PROGRAMS ALREADY UNDERWAY

FSC has more than 2 million hectares of family woodlands certified under group certificates in the U.S. Existing group certificates are open to members in many U.S. states, though they are concentrated in the Great Lakes region and the U.S. Southeast. The two most successful models are those sponsored and managed by either a commercial producer or a state natural resource agency. The commercial producer-sponsored model is the fastest growing at present, and two certificates (one led by Domtar and the other by International Paper) have grown by 400% (350,000 hectares) in the past 12-18 months.

POTENTIAL FOR LEVERAGE

FSC will be focusing potential financial partnerships on complementary purchasers of wood products, as well as others interested in growing group certification generally. These interests include national furniture manufacturers/retailers, building products manufacturers, consumer packaged goods companies and general retailers.

PROJECTIONS FOR FSC FM GROUP CERTIFICATION TODAY WITHOUT EXPECTED INVESTMENT FROM DBC

Applying the current producer-sponsored model in the region over the next five years, estimated growth in group certification would be approximately 1-1.5 million additional hectares of woodlands.

IMPACT OF DBC INVESTMENT IN THE AMOUNT REQUESTED

The DBC funds would be specifically focused on the land base within the economic hauling radius of the relevant mills, so our best estimate is that adoption of certification would be similar to that of the recent successes of Domtar and IP, in the range of 200,000 to 300,000 hectares of additional certification.

IV. RAINFOREST ALLIANCE (RA)



Rainforest Alliance (RA) focuses on farm and forest stewardship. Its mission is to support conservation and livelihoods. The 501c3 nonprofit organization has a US\$40M annual budget. It is a global organization, but focuses primarily on 15 countries. In addition, RA has recently announced a merger with UTZ, the Dutch sustainable farming certification leaders, which will maintain the RA name. Han de Groot, current executive director of UTZ, will be the CEO of the Rainforest Alliance, which will be co-headquartered in Amsterdam and New York City.

Outreach to small landowners is a global priority for RA and it invests in parallel efforts that help reach them. One successful initiative is the “Small Farmer App” that can be used on an iPad, smartphones, etc.

RA collaborates with partners. No project is implemented alone — examples include organizations such as University of Kentucky, ATFS, North Carolina State, Yale, state and local governments, and others.

In their streamlined assurance work, RA looks at all standards that exist to assess the critical pieces that distinguish at the field level. They then take that information and implement a landscape-specific framework to identify the critical criteria. RA uses all available tools: state level databases, FSC risk registry, Best Management Practices guidelines, NatureServe, etc.

CURRENT PROGRAM

Appalachian Woodlands Alliance (AWA) is a partnership between Rainforest Alliance and forest products companies Avery Dennison, Columbia Forest Products, Evergreen Packaging, Domtar, Kimberly-Clark, Staples and the U.S. Forest Service. Uniting companies with small private landowners, the AWA works to increase sustainable forest management and enhance the domestic market for sustainable timber products across the Southern and Central Appalachians. This successful model can be applied in a pellet producing region, engaging multiple pellet producers, and aligning institutions toward an aggressive landowner outreach and engagement effort designed to advance sustainable forest management and certification on the ground.

The AWA works to advance five work streams in one geography: landowner outreach and education, streamlined assurance models, healthy forest ecosystems, market transformation and communications. To date, the AWA has been successful in reaching thousands of landowners representing tens of thousands of acres, and landowners are now beginning to enter the process of timber management and advancing towards FSC certification.

Below are two potential investments for the DBC, which would help accelerate RA's work with small landowners and stimulate certification:

#1 - DESCRIPTION

RA could implement a similar concentrated multi-year effort that would aggressively address the challenge of improving and rewarding sustainability within family forests in targeted landscapes, critical to the wood pellet procurement supply chain in the southeastern United States. The project would be designed to markedly increase participation of family forest owners in sustainable forest management by clearly demonstrating the economic, social and environmental value of certification (or similar assurance) schemes.

SCOPE AND CONDITIONS

This work will result in: 1) an increase in the number of family forest owners actively engaged in SFM, including timber harvesting, and by doing so create or support healthier forest ecosystems; 2) an increase in sustainably produced (preferably certified) wood/fiber available to FSC and other sustainable-oriented marketplaces and the project corporate partners; 3) an increased perception by landowners of the enhanced value proposition between their SFM activities and between sustainable sourcing programs; and, 4) healthier forest ecosystems as owned or managed by project participants in the targeted landscapes/woodsheds.

TIMING

This project could be developed beginning in 2018 with scoping and partnership development and would contemplate a 3-year investment.

PARTICIPANTS AND ROLES

Potential staff could include the RA project team and senior RA staff who are directly involved, including those from the certification unit and the evaluation and research, markets, training and communications teams. In addition, to be effective, this would require additional on-the-ground staffing in the region.

Potential partners would include members of the pellet industry, landowner outreach specialists, including extension service providers, and the DBC energy producer partners. RA would synthesize learnings from relevant research and engage with intermediaries trusted by landowners to collaborate to design and implement education and outreach efforts that promote adoption of SFM practices, minimize negative impacts on critical forest conservation values, communities and businesses, and advance certified forest management.

This means engaging individuals and organizations that have established relationships and are trusted resources among family forest owners. RA would also seek to collaborate with organizations that have demonstrated expertise and experience in education and outreach, specifically with family forest owners in the Southeast U.S. RA will seek to align with other similar initiatives already underway and combine efforts whenever possible, seeking to build bridges among organizations with common goals.

DBC INVESTMENT NEEDED

- \$200,000-\$600,000 over a three-year period.

POTENTIAL FOR LEVERAGE

This project would have excellent potential for financial and programmatic leverage from additional stakeholders including the USFS (an AWA funder) and other complementary forest products industry stakeholders. RA would be interested in working with DBC to seek additional resources for the effort.

#2 - DESCRIPTION

FSC Group Certification: building a certified fiber infrastructure for the DBC and the pellet industry, following the Domtar/IP model application of FSC group certification.

FSC group certification has emerged as the most successful tool to date in growing the FSC certified land base across the U.S. South. RA, as the largest certifier of FSC forest management in the world, and the developer of the FSC group certification model, is well positioned to provide the technical assistance necessary to grow group certification across the pellet-producing region of the U.S. South. In addition, RA, with the support of P&G and WWF, recently held the first FSC group certification holder gathering ever in Fort Mill, South Carolina, gathering 30% of all group certification managers in North America.

SCOPE AND CONDITIONS

RA can work to develop the group certification model by first identifying or developing the appropriate group manager and providing technical assistance necessary to launch the certificate with woodland owners. The specific goals and objectives regarding wood and fiber for the group would need to be developed with appropriate parties within the context of anti-trust regulation.

The FSC group model is very flexible and the scope and scale of the project could be developed in alignment with the DBC geographic focus and market conditions.

PARTICIPANTS AND ROLES

RA would be able to provide the technical training, including staff from the RA certification unit and the project implementation team unit. Technical training (materials and templates) for creation of the FSC structure necessary to launch any group model could be delivered in 2018. Depending on landowner enrollment, certified fiber could be produced quickly.

POTENTIAL FOR LEVERAGE

To fully leverage this investment, the project would need to leverage the existing and developing pellet supply chain, including consulting foresters, loggers, saw mills, landowner associations and even large industrial landowners.

RA would be interested in working with DBC to seek additional resources by engaging complementary supply chain partners in the forest products sector.

DBC INVESTMENT NEEDED

- \$100,000

PROJECTIONS FOR THE RA PROGRAM WITHOUT EXPECTED INVESTMENT FROM DBC

RA currently has no plans to develop a sister program without the support of DBC, but is very interested in working with DBC to leverage any investment in the pellet region to realize a successful project.

IMPACT OF DBC INVESTMENT IN THE AMOUNT REQUESTED

See Scope and Conditions.

V. ENVIRONMENTAL INCENTIVES



Environmental Incentives (EI) is a mission-driven, for-profit company that designs performance-driven approaches to conservation. EI empowers public and private sector leaders to maximize their effectiveness in creating the resilient water, land and wildlife resources that sustain healthy communities. Since its establishment in 2004, EI has become a leader in designing natural resource programs and policies across the country and internationally. EI has worked extensively on working lands, although primarily rangelands and farmlands, and is interested in collaboration with the DBC in the forest sector. It creates programmatic mitigation approaches, like credit exchanges, that create incentives for conserving wildlife habitat and water resources on public and private land. These approaches allow for innovative finance mechanisms to provide a new revenue stream for landowners who produce defined outcomes on their land for resources of concern. Below is a testimonial from a landowner about one of EI's habitat exchanges:



The Exchange will create an economic incentive for growers and landowners, like myself, to maintain high quality wildlife habitat on our farms as well as to diversify our income beyond just farming.”

— John Brennan, Knaggs Ranch

INCREASING FINANCIAL INCENTIVES FOR SUSTAINABLE FORESTRY CERTIFICATION

Small forest owners in North America can provide a large supply of sustainable biomass to achieve the Dutch Biomass Sustainability Covenant's goal of 100% FSC or equivalent certification of woody biomass used in cofiring in the Netherlands by 2023. Yet, the financial costs and administrative burden of achieving and maintaining certification are a significant barrier for many small forest owners and managers.

Developing additional financial incentives for forest owners to certify and maintain sustainable forestry operations may help DBC to achieve the needed levels of certification through the Stimulation Program.

LEVERAGING MITIGATION CREDIT MARKETS

In the United States, environmental regulations requiring mitigation (see side bar) drive the development of offset credit markets for water, species and habitat, and carbon. EI estimates that across the U.S., nearly \$6 billion is spent annually on wildlife and land mitigation alone, largely driven by the Endangered Species Act and equivalent state legislation. Where they exist, credit markets represent a significant revenue stream for conservation activities undertaken on working landscapes.

Credit markets can bolster sustainability certification programs by creating a dual income stream for landowners and increase the financial attractiveness of enrollment. For example, **actions taken to meet forest management sustainability certification requirements may also be used to generate species, water or carbon credits where markets exist. In this case, landowners would not only receive potential preference for their certified timber, pulpwood or biomass, but also have a sellable mitigation credit to compensate for conservation actions undertaken.**

WHAT IS MITIGATION?

As defined and codified in the Council on Environmental Quality (CEQ) National Environmental Policy Act (42 U.S.C. 4321 et seq.) Regulations (40 CFR 1508.20), mitigation includes the following :

- **Avoid** the impact altogether by not taking the action or parts of the action;
- **Minimize** the impact by limiting the degree or magnitude of the action and its implementation;
- **Rectify** the impact by repairing, rehabilitating, or restoring the affected environment;
- **Reduce or eliminate** the impact over time by preservation and maintenance operations during the life of the action; and
- **Compensate** for the impact by replacing or providing substitute resources or environments.

Key elements of robust credit programs include:

- Methods to measure the unit of environmental good (e.g., functional acre of habitat, pound of carbon, etc.).
- Performance standards for credits, such as rules for durability and additionality.
- Protocols for verifying, monitoring and tracking credits over time.
- Defined rules and procedures for transacting credits between parties.
- Governance and adaptive management procedures for ensuring the program continues to improve over time.

PARTNERING CREDIT MARKETS WITH DBC CERTIFICATION STIMULATION PROGRAM

EI is a mission-driven small business that creates programs and policies to protect and restore the environment while simultaneously supporting working landscapes and the communities that depend on them. **EI has developed credit markets for both species and water quality in multiple regions across the U.S. EI also has experience developing credit markets that can be paired directly with certification programs.**

Environmental Incentives and partners could assist DBC in partnering the Stimulation Program with new or existing credit markets to increase the attractiveness of certification to small forest owners in North America. **Taking this approach, DBC could develop incentives that would increase the value of certification for forest landowners, increase participation in the certification program, and provide benefits to species and habitats in need of protection.** By working with Environmental Incentives, DBC could incentivize dozens of individual small forest managers to not only meet certification standards for participation in the Dutch sustainability mandate under the Biomass Sustainability Covenant, but also create multiple habitat, water, and carbon benefits in their forest lands. This would help leverage additional funding, either through mitigation buyers or public conservation funds, and vastly increase the environmental impact of DBC's investments.

Creating additional and sustained demand for the outcomes of sustainable forest management (i.e., certified biomass and mitigation credits) also creates the space for new public-private partnership opportunities. Specifically, private capital will be more attracted to invest in sustainable forestry projects and alleviate the burden of initial startup costs for planning and restoration work if end buyers are willing to pay for verified performance outcomes (DBC and Dutch energy companies for sustainable biomass, and private land developers or agencies for mitigation credits) using defined contract terms.

ANALOGOUS PROGRAMS

The idea of partnering certification programs with credit markets is not new. For example, Environmental Incentives has leveraged this approach to help wine growers and the state of California expand sustainable viticulture while protecting riparian bird habitat and improving water quality in the Mokelumne River watershed. Working with agriculture and conservation partners, EI designed a program to create Riparian Habitat Credits that could be sold to water utilities, downstream water users, or other buyers invested in a healthy watershed. Additionally, EI directly aligned the requirements for developing Riparian Habitat Credits with the protocols for the [Lodi Rules](#), an existing local certification program for sustainable viticulture, to create a dual revenue stream of sustainably grown wine able to be sold at a price premium, and sellable habitat credits.

In the sustainable forestry space, there are many organizations that protect working forest lands by acquiring conservation easements, and also creating additional income generation from activities like creating carbon credits and supporting sustainable timber certification. Environmental Incentives has a broad network of environmental groups, professional restoration organizations, impact investors, mitigation buyers and others who could lend expertise to the development of a crediting program that could be paired with sustainable biomass certification for DBC. For example, Environmental Incentives has a long-standing partnership with the Environmental Defense Fund to develop incentive programs on working lands, including specific partners in the Southeast.

SCOPING THE OPPORTUNITY

Environmental Incentives has developed and launched comprehensive habitat crediting programs for between \$200,000 and \$500,000, with costs significantly varying based on scoping considerations. If relevant credit markets already exist in regions where sustainable biomass certification is occurring, the effort required to align with these markets would be significantly less. Before launching into program development, important scoping questions would need to be answered, including the following.

- What credit markets already exist within the relevant region?
- What are the characteristics (ownership, size, scale, proximity to pellet mills) of the FFOs in the relevant region?
- What is the long-term demand (mitigation or conservation) for species, water and carbon values within the relevant region (i.e., what endangered species exist with the region)?
- Who are the key players that need to be engaged?
- What are the additional environmental values most aligned with FSC and other certification protocols?

PROJECTIONS FOR THE RA PROGRAM

WITHOUT EXPECTED INVESTMENT FROM DBC

Without DBC investment, there is no plan to develop a credit exchange or similar program in the Southeast. DBC may be able to scope partnerships with already established credit programs, but these opportunities are likely to be less targeted and effective.

IMPACT OF DBC INVESTMENT IN THE AMOUNT REQUESTED

With DBC investment, EI would work with partners to develop a comprehensive program to partner certification with mitigation credits to create new and compelling financial incentives for working forest landowners.

VI. USFS FOREST STEWARDSHIP PROGRAM (FSP) (THROUGH STATE FORESTRY PROGRAMS)

The FSP, via state forestry agencies, provides assistance to forest owners where “good stewardship will enhance and sustain the long-term productivity of multiple forest resources and produce healthy, resilient forest landscapes.”



U.S. Congress, in the Food, Conservation, and Energy Act of 2008 (the 2008 Farm Bill), tasked states and territories to craft assessments of the forests within their boundaries and develop strategies to address threats and improve forest health. The resulting Statewide Forest Resource Assessments and Strategies, or Forest Action Plans, provide an analysis of forest conditions and trends and delineate priority forest landscape areas. They offer practical, long-term plans for investing state, federal and other resources where they can be most effective in achieving national conservation goals. State forestry agencies work with all private landowners and focus landowner outreach in priority landscapes.

Landowners need to own 10 or more acres of woodlands/forests and express interest in developing a forest stewardship management plan. The plan is developed based on the landowner’s goals and resources they wish to enhance or protect.

Assistance offered through the Forest Stewardship Program also provides landowners with enhanced access to other USDA conservation programs, forest certification programs, and forest product and ecosystem service markets.

The FSP has a Memorandum of Understanding (MOU) with both ATFS and FSC. If a landowner meets the requirements of the FSP, they are then eligible for the certification process under these two certification standards. Although the FSP budget has been drastically cut as a part of the new Presidential Administration Budget, there are still opportunities for collaboration with FSC, ATFS and Rainforest Alliance. Further discussions with these and potentially other organizations would be needed to assess potential collaboration.



Chapter 2: Recommendations for DBC Stimulation Program, Phase I

For the purposes of this report, Phase I timing is July to December 2017, the months immediately following this report through end of 2017.

Although the Dutch government will have not yet confirmed the forest management certifications accepted under the SDE+ Sustainability Requirements, the DBC Stimulation Program should begin initial implementation steps as soon as possible, due to the very tight timing outlined in Article 4 of the Covenant (100% certified by 2020, at latest 2023), the long lead times for program implementation (even for programs that are already in place), and the challenges inherent in any attempt to increase certification among family forest owners (FFOs).

RECOMMENDED ACTIONS IN 2017

*(*Note, some actions may be pushed to Phase II/2018 if time is limited)*

- The first and arguably most important action to take is to **seek and hire a North American Manager for the DBC Stimulation Program**. Without “boots on the ground” the program cannot successfully launch, given the many tasks that will need to be done at the onset. The successful candidate should have extensive experience within the forest sector and, in particular, in dealing with FFOs. Research shows that professional foresters are among the most trusted by FFOs. Project management experience, a degree in forestry and experience with forest certification is strongly recommended.
- Equally as important, though not as time critical, is the **engagement of a Communications Professional, to develop a comprehensive communications plan for the SP**, and liaise with the communications counterparts of each potential partner organization, media and pellet mills or other certificate holder organizations. The successful candidate should have extensive experience not only in communications, but also in the forest sector and ideally the bioenergy space. A diverse set of communications activities will be needed to ensure proper understanding of the DBC, the SP and the goals and objectives of the project. In addition, the Communications Professional should be comfortable representing the DBC in public forums as needed. A **key component to the DBC communications is a presence at, and (if possible) presenting at, relevant forest sector conferences and high-profile forums, including Biomass and Bioenergy conferences, as well as landowner and forest sector events to maximize exposure**.
- In addition to hiring an NA Manager and a Communications Professional, the DBC should **create an Advisory Group, consisting of North American forest sector stakeholders**, to provide guidance and advice for the NA Manager and the DBC SP as a whole. This group would meet, or at a minimum have a conference call or webinar, once a quarter. Members of this group will evolve as more organizations become part of the DBC SP. The NA Manager should be responsible for drafting a charter and any objectives of the Advisory Group. *This could potentially be pushed to Phase II/2018.

- Once hired, the NA Manager should develop a formal “Request for Proposal” (RFP) to issue and solicit formal proposals for the SP. The RFP should be sent first directly to the programs who have provided initial proposals in this report (AFF, SFI, FSC, RA, EI) and more broadly announced on the DBC website and through specific media channels. The time-frame of the RFP should be no more than two months for submission. *This could potentially be pushed to Phase II/2018.
- A few programs presented in this report will afford the DBC SP opportunities for “easy wins.” These turnkey programs are either already developed or well in progress, and the infusion of DBC SP investment would likely get verifiable results within 12-18 months. Specifically, **programs recommended for initial investment** include some or all of the following: an Independent Managed Group (IMG) certification to ATFS, administered by a pellet mill certified to SBP; investment in the SFI Forest Partners Program; investment in an FSC group certification administered by a pellet mill certified to SBP; and/or investment in the Rainforest Alliance’s program for FFO outreach.
- Once these initial investments have been agreed upon, **the DBC should sign Memorandums of Understanding (MOUs) and related announcements should be issued publicly and as directed by the Communications Lead.**

THE TABLE BELOW PROVIDES A SUMMARY OF RECOMMENDED ACTION ITEMS AND CORRELATED TIMING FOR PHASE I/2017

ACTION	TIMING
Solicit CVs of potential candidates and hire North American (NA) liaison to manage launch of Stimulation Program (SP) and begin Request for Proposals.	July – August 2017
Engage communications professional to draft communications plan for DBC SP, including the announcement regarding the RFP, initial actions and subsequent partnerships and collaborations.	July – August 2017
Establish an NA Advisory Group (AG) (among potential stakeholders) to provide guidance and advice for the DBC and SP implementation.	Once NA Manager is hired. Note, this could be pushed out to Phase II/2018, given the significant amount of work suggested in 2nd half 2017.
Consider immediate investments (i.e., forgo an RFP process) with turnkey programs (see asterisk below). Strike MOUs with said programs.	August – December 2017
Issue Request for Proposals, with a two-month deadline. Announce publicly with Press Release.	Once NA Manager and Communications Professional are hired.
As needed, commission U.S.-based anti-trust study with legal advisory group.	September – December 2017
Attend and/or present at strategic industry and forest sector events to maximize exposure.	Ongoing
Update website with important developments as appropriate.	Ongoing
<p>*Consider with Board and AG immediate investments with programs already in place. Recommended initial investments (recommend choosing at least two out of four to focus on):</p> <ul style="list-style-type: none"> • ATFS Independent Managed Group forest management certification with pellet mill certified to SBP as certificate holder. • SFI Group Certification in select regions through Forest Partners Program investment. • FSC Forest Management Group Certification with pellet mill certified to SBP as certificate holder. • Investment in the Rainforest Alliance’s program for FFO outreach and group certification. 	

Chapter 3: Recommendations for DBC Stimulation Program, Phase II

For the purposes of this report, Phase II timing is January – December 2018. Ideally, the forest management certifications accepted under the SDE+ Sustainability Requirements will have been decided by this point and the initial steps taken by the DBC in Phase I will be well underway.

RECOMMENDED ACTIONS IN 2018

- Scheduling and organization of webinar and/or in-person meetings for Advisory Group should be finalized for the year ahead.
- A comprehensive communications plan, directed by the Communications Lead, should be laid out for the year, including MOU announcements, website updates and conferences and events for maximum exposure.
- A thorough review of the 2017 activities' progress to date, including an assessment of what remains to be completed and what needs to be continued for the upcoming year.
- A thorough review of recommendations in investment for additional proposed projects should be undertaken by the NA Manager and the Advisory Group. Recommendations will need to be made to and approved by the DBC Board.
- A second round of investments will be made to support certification programs, with supporting communications for each. MOUs should be signed to confirm collaborations for projects.
- A comprehensive assessment of the initial investments made in Phase I should take place within the first quarter, and then in the third or fourth quarter of 2018. NA Manager should be responsible for reporting back to Board on progress made.
- Development of communications materials and information tools to help increase forest sector understanding of the SP.

THE TABLE BELOW SUMMARIZES RECOMMENDED ACTION ITEMS AND CORRELATED TIMING FOR PHASE II.

ACTION	TIMING
Scheduling meetings for Advisory Group.	January 2018
Review and recommend further investments.	January – March 2018
Second round of investments made. Corresponding MOUs and communications executed.	March 2018
Communications messaging and materials development.	January – March 2018
Initial assessment of 2017 turnkey investments.	April 2018 and September 2018
Update website with important developments as appropriate.	Ongoing

Chapter 4: Recommendations for DBC Stimulation Program, Phase III

For the purposes of this report, Phase III timing is January – December 2019. Ideally, the project investments made in 2017 and 2018 will be well underway, and the certification among FFOs will have increased as a result of those projects. It is difficult to provide specific recommendations given the timeline and strong dependence on the outcomes of 2017-2018 actions. Recommendations for Phase III will become clearer once the program has begun and initial successes and challenges have become apparent.

RECOMMENDED ACTIONS IN 2019

- Scheduling and organization of webinar and/or in-person meetings for Advisory Group should be finalized for the year ahead.
- A thorough review and recommendations for additional investments into existing projects, already supported by the SP. Recommendations will need to be made to and approved by the DBC Board.
- A potential third round of investments could be made to support certification programs, with supporting communications for each. MOUs should be signed to confirm collaborations for projects.
- A comprehensive assessment of the initial investments made in Phases I and II should take place within the first quarter, and then in the third or fourth quarter of 2019. NA Manager should be responsible for reporting back to Board on progress made.



SECTION II

Primary and Secondary Data
Research to Substantiate
Recommendations in Section I

Chapter 5: Summary of Primary Research Among Family Forest Owners

This chapter provides a summary of 18 personal interviews from family forest owners (FFOs) in the southeast U.S. Each summary includes key points from the conversation. An “Implications for DBC” precedes the interview summaries, which is an executive summary of FFO perspectives as it relates to the DBC Stimulation Program. Interviews included in this section:

ALPHABETICAL BY LAST NAME

- **Name not disclosed** – Perry County, Alabama
- **Name not disclosed** – Sumter County, Alabama
- **Name not disclosed** – Green County, Alabama
- **Keith Dollar** – Tuscaloosa region, Alabama
- **Tim Farley** – Alabama and Mississippi
- **Lela Graden** – South Carolina
- **Michael Harbert** – Virginia
- **Patrick Hindman** – Mississippi
- **Mickey Knapp** – near Cottdale, Florida
- **Tracy Leslie** – North Carolina
- **Patricia “Patsy” McCarthy** – Millwood, Georgia
- **Dennis Pete** – Greenwood, Florida
- **Cynthia Roseberry** – Greensboro, Hale County, Alabama
- **Jerry Sapp** – near Cottdale, Florida and some land in Alabama
- **Lance Stripling** – Pickens County, Alabama
- **Wade F. Tanner** – Douglas, Georgia
- **Frederick Webb** – several counties, Florida
- **Willie Dee Woods** – Hale County, Alabama



INTENSE LOVE FOR THE LAND	DISTRUST OF GOVERNMENT AND REGULATION	PRIORITIES ALIGN WITH SECONDARY RESEARCH	CERTIFICATION VIEWED WITH DISTRUST AND SKEPTICISM	IMPORTANCE OF ATFS
<p>Without exception, interviewees love their land and are intensely connected to it. They are committed to sustainable forest stewardship, even if it is not their “day job.”</p> <p>Many interviewees spoke of their land as intrinsic to their being (“the land is part of me and I’m a part of the land”).</p> <p>Keeping their land forested and in the family is a top priority and goal for these FFOs.</p>	<p>Some interviewees expressed a distrust of government and government initiatives.</p> <p>In general interviewees do not want to be told what to do, how to do it or when to do it when it comes to managing their land.</p>	<p>The priorities mentioned by the interviewees were in line with the secondary research from the NWOS and AFF survey:</p> <ul style="list-style-type: none">• Wildlife management• Recreation• Keeping the forest forested• Creating a family legacy/keeping it in the family <p>Many FFOs interviewed do manage for timber and pulpwood, but they manage for these benefits and goals as well.</p>	<p>Many interviewees would consider certification if not too onerous or restrictive and the benefits were clear.</p> <p>Many interviewees are skeptical of certification. Many associate certifications with government, even when there is rarely a connection.</p> <p>Many interviewees do not see a lot of benefit to certification. They know they are managing their forests sustainably (and their forests prove it), so many question the need to go through the trouble.</p>	<p>When open to certification, the primary certification that interviewees would consider is ATFS, which is designed specifically for FFOs.</p> <p>Although FSC has made some inroads (through forest recognition programs like the Alabama Treasure Forest Program), and Rainforest Alliance is doing proactive outreach to these types of landowners, interviewees’ perception is that the “big certifications” would be too prescriptive and restrictive.</p>

FOREST LANDOWNER INTERVIEW HIGHLIGHTS:

NAME NOT DISCLOSED

PERRY COUNTY, ALABAMA

320 ACRES – PART OF TREASURE FOREST PROGRAM

WOULD CONSIDER CERTIFICATION IF NOT TOO ONEROUS OR RESTRICTIVE AND THE BENEFITS WERE CLEAR.

- In 2001, Forest Owner bought 166 acres purely for recreation/hunting. He then bought another 154 acres adjacent to the 166 to make a total of 320.
- His original reason for purchase was to have a place to go hunting with his kids. After owning the land for a few years, he decided to get recognized under the Treasure Forest Program, which helped him understand better what forest management can do for forest health, productivity, wildlife management, etc.
- He created a forest management plan with the Alabama Forest Service. His priorities for his forest are recreation, wildlife habitat, and timber/pulpwood management.
- Forest Owner would consider getting certified on the 166 acres which is mostly pine. He wants to enhance it, to maintain it as forest.
- He does “NOT want to jump through a bunch of hoops OR be told what to do” with his property.

NAME NOT DISCLOSED

SUMTER COUNTY, ALABAMA

440 ACRES

WOULD NOT CONSIDER CERTIFICATION.

- Forest Owner and her brother are co-owners of the land. They inherited it from their parents and the land has been in their family since 1869. Her most important priority is to preserve the land and pass it on to the children.
- The land was farmland (crops) until the '70s when it was converted to timber land.
- “We don’t need to get certified. Never will. We are taking really good care of our land and don’t need a piece of paper or an auditor to tell us we are.”

NAME NOT DISCLOSED

GREEN COUNTY, ALABAMA

101 ACRES

WOULD NOT CONSIDER CERTIFICATION.

- Forest Owner bought his land and manages it for timber and for wildlife. He enjoys hunting on his land with his family.
- The land is not certified, and he is not really interested because there’s real benefit to getting certified.
- “Certification is going to restrict what I can do on my land, so I’m not too interested in that.”

KEITH DOLLAR

TUSCALOOSA REGION, ALABAMA

1,600 ACRES - 1,200 ACRES ARE CERTIFIED TO ATFS, PART OF TREASURE FOREST PROGRAM

- Keith is a third-generation landowner. He doesn’t claim to “own” the land, “no one owns land, you’re just asked to take care of the little bit you have for the time that it is in your care...then pass it on.”
- In 1900, his grandfather purchased 200 acres with a home on it. Keith’s father added acres to the property, as did Keith. Today Keith owns/manages approximately 1,600 acres.
- Keith manages primarily for timber, but his priority is wildlife management and recreation. “I manage timber, so I can have the income to keep it a forest and enjoy it.”
- The land is 2/3 in pine plantation and 1/3 in mature hardwood. It is part of the Treasure Forest Program in Alabama.
- Keith “takes care of the land because my father did and grandfather did before him...and they loved the land as much as I do.” He plans to pass the land down to his children, but “what they do with the land is completely up to them. I can’t dictate what they should do, because once I’m gone, I can’t know what their needs or priorities will be.”
- Keith decided to get certified because he was “already doing everything required for sustainable forestry under ATFS certification.” The benefits of certification include being a part of the ATFS community, relationships with other forest owners, guidance from professional foresters, and being a part of the formal forest sector (e.g., ATFS committee, AL Forest Association, etc.).

TIM FARLEY

LAND PARCELS IN 8 COUNTIES IN ALABAMA AND MISSISSIPPI

APPROXIMATELY 3,500 ACRES, SOME ARE PART OF THE TREASURE FOREST PROGRAM

WOULD CONSIDER CERTIFICATION IF NOT TOO ONEROUS OR RESTRICTIVE AND THE BENEFITS WERE CLEAR.

- Farley owns land, two sawmills, one chip mill and a logging company. His mills are FSC Chain of Custody certified. He does not see a material benefit to certifying his land. He gets no premium for certified fiber and “a lot of headache.”
- Farley lives on an 800-acre tract, and privacy is important to him.
- Farley is a third-generation landowner. He inherited some of the land from his parents, and has purchased more land over the years. He has always seen his land as a better investment than any money in the bank or in the stock market.
- Farley hunts, fishes and lives on his land. “Owning land is really burdensome if you don’t get to enjoy it too.”
- Farley manages a lot of the land for timber and pulpwood. His number 1 priority is to pass on a healthy forest to his six kids and then on to his 13 grandkids.
- He will not put any restrictions on the land, though. “They can do what they want with it when I’m gone.”
- His land is part of the Alabama Treasure Forest Program a recognition program for family forest owners.

LELA GRADEN

SOUTH CAROLINA

47 ACRES

CERTIFIED TO ATFS

- Lela owns 47 acres (“BearnLee Tree Farm”) with her husband in South Carolina and has a forest management plan. She is actively engaged in her forestland.
- In November 2015, the BearnLee Tree Farm was certified to the American Tree Farm System, SC Group Certificate.
- Her priorities with her land are forest health, wildlife habitat, recreation and creating a family legacy.
- Her FMP guidelines suggest thinning this year (2017), harvest part of it in five years (2023), and harvest another part in the next five (2028) and then another thinning ten years after that (2038). Thinning this year will bring approximately 15,000 regardless if she’s certified or not.
- Her husband used to work in the timber industry. Private landowner programs run by the paper industry during the ‘90s went away because it was really expensive to maintain, labor intensive, and there was little return. Today, even the additional income from residual biomass on this small parcel size, when spread over time, is really too small to encourage certification when no other markets are asking for it.
- They are certified because they understand the importance of sustainable forest management and enjoy being part of the community of landowners who share that value.

MICHAEL HARBERT

SPOTSYLVANIA COUNTY, VIRGINIA

194 ACRES

WOULD CONSIDER CERTIFICATION IF NOT TOO ONEROUS OR RESTRICTIVE AND THE BENEFITS WERE CLEAR.

- Mike is a third-generation landowner. It has been in his family almost 100 years.
- Mike's grandfather purchased 4,000 acres around 1920 for timber. It was part crop land, part forest, and the rest (about half) were U.S. Civil War battlefields.
- In 1926, the government bought the battlefields, which are now under protection.
- Mike's father inherited about 400 acres (not contiguous). Over his lifetime, he sold bits and pieces off and Mike has held the remaining 194 acres since.
- The last timber harvest was late '50s early '60s. Forest currently has 100+-year-old trees and is mostly hardwood, and also a bit of Virginia Pine. There is a lot of red and white oak, hickory and beech.
- Mike plans to do a harvest of some sort in the next 10-15 years, as part of his retirement plan.
- Mike's personal priorities for his land include historic preservation (there are still some Civil War earthworks present), recreation, hunting, timber growth and enjoyment of nature. His priorities as listed on his Forest Management Plan are 1. Historical preservation, 2. Maintain natural beauty, 3. Wildlife management.
- Mike is open to certification, as long as there are tangible (i.e., financial) benefits linked to the cost of certification.

PATRICK HINDMAN

MISSISSIPPI

400 ACRES

WOULD CONSIDER CERTIFICATION IF NOT TOO ONEROUS OR RESTRICTIVE AND THE BENEFITS WERE CLEAR.

- Patrick's great-grandfather purchased 1,600 acres of land in the mid-1800s to farm cotton. Over the generations, the land was divided and sold off. Today, Patrick owns and manages 400 acres. Patrick's grandfather converted the land from row-crops to forest for timber.
- Today, Patrick manages for timber, both softwood and hardwood. He sees it as much more than an investment of his time and money. There is an intense emotional connection to the land, "I'm a part of the land, the land is a part of me."
- Patrick's priorities are keeping the forest forested, handing it down to his kids, and managing for wildlife. He manages his land in order to get the biggest return on those priorities.
- Most of the pine plantation portion of the land is loblolly pine. The rest is either a managed mixed stand or pristine and untouched for many decades.
- His homestead is still on the land.
- Patrick says that he would need to understand what the "hitch" is to get certified. It's not about getting it paid for or having someone write up a management plan for him. He doesn't need that. He would want to know "what's in it for them, why do they want me to certify my land? And if they need it certified, then pay me more for my fiber coming off my land...don't pay for my certification."

MICKEY KNAPP

NEAR COTTONDALE, FLORIDA

140 ACRES

WOULD NOT CONSIDER CERTIFICATION.

- Mickey owns his land with his brother.
- They both hunt, fish and use it for personal recreation with their families. Mickey has a house on the land that they use as a weekend home to get away from town.
- Mickey manages it for timber as well, but his priority is to maintain a healthy habitat for wildlife.
- "I don't have certification – it doesn't pay. I love my job a whole lot, but if you told me you wanted me to still work, but you were going to take my paycheck away, I'd walk out the door."

TRACY LESLIE

CHESTER COUNTY, SOUTH CAROLINA NEAR THE COMMUNITY OF BLACKSTOCK

81 ACRES

WOULD CONSIDER CERTIFICATION IF NOT TOO ONEROUS OR RESTRICTIVE AND THE BENEFITS WERE CLEAR.

- Tracy's father bought this land in 2003 as an investment toward his retirement and for recreational purposes, but he died unexpectedly and the land was passed to her.
- Former owners of the land have managed it for timber and Tracy plans to continue what they have started. She does not have a Forest Management Plan, but is likely to get one before she has it harvested.
- Tracy sees value in owning land as an investment and also as a way of diversifying her portfolio; managing it for timber is part of that. Wildlife habitat and recreational purposes are also priorities.
- Tracy likes the idea of having the land certified; however, she says "while it's easy to see the value of the management plan, it is more difficult to see a financial return in the annual certification payments."

PATRICIA "PATSY" MCCARTHY

MILLWOOD, GEORGIA

2,200 ACRES

CERTIFIED TO ATFS

- Patsy is a fifth-generation landowner. Her family acquired land in the area in the very early 1800s.
- She inherited much of the land, and bought some with her husband and then on her own, once he died in 1994.
- Patsy knows her land as well as she knows the rooms in her house. She manages it as a diversified portfolio of revenue streams. She doesn't want just one source of income from her land, as that would put her at a much higher risk. She manages her land for:
 - Saw timber/pulpwood/biomass (loblolly, longleaf, slash)
 - Pine straw
 - Longleaf conservation
 - Riparian/wetland mitigation banking
 - Hunting leasing (leases out her land to hunters)
 - Non-timber forest products: pecans, blueberries, mushroom (chanterelles) collection
- Because her land is used for hunting, and she charges a premium for that, healthy wildlife habitat management is of the utmost importance. Her timber management incorporates methods that are best for the wildlife, which include quail, turkey, deer, and some boar (although she doesn't like boar on her land). She plants copious "food plots" to ensure the wildlife get enough to eat, since much of her land is intensively managed. She also ensures they get the vitamins and minerals wildlife need to prevent diseases, ticks and other parasites and protect them from harm.
- Patsy also ensures that her land is in "balance." If she intensively manages some tracts, she leaves others alone to grow naturally. There are places in her forests that have never been touched (at least since her family acquired it). She is intensely connected to the land, and loves it dearly.
- She also replants immediately after harvesting, once the site is cleaned up. "Leaving a tract bare is throwing money down the drain."
- Patsy uses the "Highest and best use" model for the land, and understands what her soil, land and climate can provide.
- Patsy is ATFS certified. She has a very high respect for ATFS. She was "Tree Farmer of the Year" in 1997. She maintains her certification as an example to others, and sees it as a way to promote the work that she and so many other tree farmers like herself do every day.



“Leaving a tract bare is throwing money down the drain.”

DENNIS PETE

GREENWOOD, FLORIDA

366 ACRES OF PINE PLANTATION, 80 ACRES OF HAYFIELDS

WOULD CONSIDER CERTIFICATION IF NOT TOO ONEROUS OR RESTRICTIVE AND THE BENEFITS WERE CLEAR.

- The land has been in Dennis' family for four generations, since the early 1800s. He inherited the land from his father in 1980, who had converted cow pasture and row-crops to pine forest and hay.
- Dennis grows longleaf, slash and loblolly pine. He is part of the Forest Stewardship Program, implemented by the state of Florida. He has a detailed management plan that he drafted and maintains himself.
- Dennis replants immediately after harvest and clean up. He does not leave his land idle unless it is required from a sustainable forest management perspective.
- He does not want anyone telling him how to manage the land he was born on and knows like the back of his hand.
- His number one priority is making sure his forest is healthy so he can pass it on to his son, getting the highest and best use out of his land, and selling fiber from his land.
- He lives in Pensacola, but comes 3 days a week to work on the land.
- "I don't need help on how to manage my trees. If you want to help me, help me sell my trees."
- "Everything I do is out of love for this land. It is as dear to me as my children."



“If you want to help me, help me sell my trees.”

CYNTHIA ROSEBERRY

GREENSBORO, HALE COUNTY, ALABAMA

1,245 ACRES OF CONTIGUOUS WOODLAND – SOME ARE PART OF THE TREASURE FOREST PROGRAM

WOULD CONSIDER CERTIFICATION IF NOT TOO ONEROUS OR RESTRICTIVE AND THE BENEFITS WERE CLEAR.

- Her husband bought land in a nearby county, and then traded it with a timber company for land in Hale County (land swap). He then bought more land adjacent to the property. There is a house on the property, but she no longer lives there.
- They converted row-crop land to forests over the years.
- Husband was killed in 2008 in a car wreck. She has had her son-in-law manage the land for her since.
- The woodland is almost 100% pine, although along the streamside management zones (SMZs) she has some hardwood. She had it thinned about five years ago. It will be ready for a second thinning soon.
- Her tree farm is her only source of income, but more than being financially tied to the land, she is very emotionally attached as well. Her priority is to keep it in the family.
- The land is not certified, but she would consider it if the incentive was there and the benefits were clear and tangible.
- Cynthia leases approximately 1,000 acres for hunting (and has it managed for wildlife). There is also a cemetery from the 1800s, which is considered a "special site."

JERRY SAPP

NEAR COTTONDALE, FLORIDA, AND SOME LAND IN ALABAMA

1,200 ACRES

WOULD NOT CONSIDER CERTIFICATION.

- Jerry has acquired land over the years. He manages it for timber and wildlife. Sustainable forest management is his number one priority. He lives on a tract of 365 acres.
- Jerry owns timberland, a logging business and a wood brokerage business. His children are all involved in the business as well.
- Some of his land is worth more to him and his family in aesthetic beauty and wildlife preservation than it is for timber.
- Some of his land is planted in softwood stands. Some of it is natural forest.
- He wants to pass his land, his timber business, and his logging business down to his kids and their kids.
- Jerry and his wife have no intention of certifying their land. “Why would I choose to have someone tell me what I can do and when I can do it with my land? Would you let some auditor come in and snoop around your closet and tell you what to put where and when to do it? No, you’d say, get out of my closet!”



“Why would I choose to have someone tell me what I can do and when I can do it with my land?”

LANCE STRIPLING

PICKENS COUNTY, ALABAMA

OWNS APPROXIMATELY 400 ACRES

WOULD CONSIDER CERTIFICATION IF NOT TOO ONEROUS OR RESTRICTIVE AND THE BENEFITS WERE CLEAR.

- Lance owns and manages approximately 400 acres of uncertified land. He grew up on 160 acres of the land, which he inherited from his parents, who are still living there in the house where he was raised. He then purchased an additional 250 acres adjacent to the original tract.
- The land is mixed use — part forest, part cattle pasture.
- The land is part of the Alabama State Forest Stewardship Program.
- Part of his forest is a 20-year-old mixed stand (softwood and hardwood).
- Part of it is pine plantation, which was just thinned at 15 years old.
- Lance manages the forest for timber, wildlife management, fruit trees and pecans.
- The land does not have any listed species of concern on it.
- Lance’s priorities for his forest:
 - Keeping the forest, a forest.
 - Passing it along to his kids – 2 boys.
 - Recreation – he loves to hunt, camp and hike with his boys.
 - Managing it as an investment, and have multiple revenue streams and benefits.
 - Wildlife management; greenfields, fruit trees, pecans.
- Would he certify? If there’s a benefit to him and his family. He would consider it if there was no cost to him, and the administration was managed by the mill. However, if it’s too restrictive, he would not be interested in it.
- “There’s not enough benefit to justify someone telling me what to do when, when I know this land better than anyone.”
- “What it really comes down to is managing your land the best you can and putting food on your table.”

“There’s not enough benefit to justify someone telling me what to do when, when I know this land better than anyone.”

WADE F. TANNER

DOUGLAS, GEORGIA

1,400 ACRES

WOULD CONSIDER CERTIFICATION IF NOT TOO ONEROUS OR RESTRICTIVE AND THE BENEFITS WERE CLEAR.

- Wade has come into his land multiple ways. He inherited a good bit from his father (his father is still living on the land), he has done land swaps and has bought acreage over the years.
- Some of the land has been in his family since the 1800s.
- He manages his land for pine straw and pine timber and also grows longleaf pine. Aesthetics are extremely important for him and his family, though. His teenage girls want the forest to be a pretty place where they can wander on horseback and foot, and he enjoys hunting on it with his family and his friends, so the timber has to come after those priorities.
- Wade also owns a logging company, which he uses to harvest on his own land and many others.
- While his land is not certified, Wade would be willing to consider certification. He sees it as an opportunity to connect with other landowners, and to be part of the certification's communications and outreach.



FREDERICK WEBB

SEVERAL COUNTIES, FLORIDA

6,000 ACRES

WOULD NOT CONSIDER CERTIFICATION.

- Fred has purchased parcel after parcel over the years. He sees land as a very good investment. Much of his land is in timber, although some is also in vineyards.
- Fred lives on a parcel that is 2,600 acres; privacy is a top priority for him.
- Fred is distrustful of government and environmental organizations, including certifications. He believes that some environmentalists want to destroy everything he has or has worked for over the years.
- “[Some environmentalists] impose environmental sharia law.
- “No way would I ever invite someone on my land to tell me what to do.”

““ No way would I ever invite someone on my land to tell me what to do.”

WILLIE DEE WOODS

HALE COUNTY, ALABAMA

235 ACRES

WOULD NOT CONSIDER CERTIFICATION.

- Willie and her husband bought the land in the '40s after getting married. At the time, it was pasture land and bottomland/wetland hardwoods. They raised their six kids on the land.
- During the 1960s, they high-graded (cut the high-value timber and left the rest) the hardwood forest.
- During the 1990s they sold their cows and converted the pasture land to forest and hayfields.
- Has not cut any timber since the 1960s and doesn't have any intention of cutting in the future.
- If prices got high enough, and her land manager (her grandson) told her she should, she would consider it.
- Willie's priorities are keeping the land in the family, having it available to her kids, grandkids and great-grandkids for recreation (mostly hunting and fishing, some birding).
- Never thought about certification. Just didn't need that. “[I] don't want to be tied down to a set of rules for the land.”

Chapter 6: Summary of Primary Research with Key Forest Sector Stakeholders

This chapter provides a summary of the 17 personal interviews with 19 individuals from some of the most well-known North American forest sector experts. Most stakeholders are American. A few are Canadian. Each section includes key points from the conversation. An “Implications for DBC” precedes the interview summaries, which is an executive summary of interviewee perspectives as it relates to the DBC Stimulation Program. Interviews included in this section:

US (ALPHABETICAL BY LAST NAME)

- **Nadine Block**, COO of Sustainable Forestry Initiative (SFI)
 - **Brett J Butler**, PhD, Research Forester, U.S. Forest Service
 - **Sarah Crow**, Senior Director of Certification, American Forest Foundation (AFF)/**Kristina Duff**, Manager of Certification, AFF
 - **Richard Donovan**, SVP, Rainforest Alliance
 - **Kathryn Fernholz**, Executive Director, Dovetail Partners Inc.
 - **Andrew Goldberg**, Project Manager, Appalachian Woodlands Alliance (AWA), Rainforest Alliance
 - **Barry Graden**, Director, SFI Forest Partners® Program
 - **Allison Gratz**, Director of Sustainability, Enviva
 - **Tom Martin**, President & CEO, American Forest Foundation (which oversees American Tree Farm System (ATFS))
 - **Barry Parrish**, Fiber Procurement and Sustainability Manager, Georgia Biomass
 - **Katie Riley**, Senior Associate, Environmental Incentives (EI)
 - **Dr. Carlos Rodriguez-Franco**, Deputy Chief, Research & Development, USFS/USDA/
Fahran Robb, Foreign Agricultural Service, USDA
 - **Laurie Schoonhoven**, National Forest Stewardship Program Manager, USFS
-

CANADA (ALPHABETICAL BY LAST NAME)

- **John W. Arsenault**, Manager, Wood Pellet Group, Quebec Wood Export Bureau
- **Gordon Murray**, Executive Director, Wood Pellet Association of Canada (WPAC)
- **Wendy Vasbinder**, Market Access Policy Officer, Natural Resources Canada

IMPLICATIONS FOR DBC

SKEPTICISM REGARDING SUCCESS	OPEN TO COLLABORATION	IMMEDIATE OPPORTUNITIES AVAILABLE	IMPORTANCE OF ATFS	GROUP CERTIFICATION
<p>All stakeholders (without exception) emphasized the challenges around forest management certification of FFOs, citing landowner priorities, costs, administrative burden, etc.</p> <p>It was stressed that indicators beyond FM certification should be considered.</p>	<p>In general, stakeholders are open to working with the DBC, either in partnership or, at the very least, helping the DBC along the path to meeting its objectives in the form of advice, guidance and information.</p>	<p>Programs that are already underway (see Chapter 1 for detailed descriptions) would benefit from DBC's immediate investment and promotion of additional markets for forest owners.</p>	<p>It would be a significant mistake (and potentially fatal to the program) to not recognize ATFS, a 75-year-old program that has reached millions of landowners, representing millions of acres.</p> <p>ATFS is the only certification that has made any significant inroads with small landowners.</p> <p>Not accepting a PEFC endorsed program sets a bad precedent. An analogy would be accepting FSC US, but not FSC Germany.</p>	<p>Forest Management certification at the group level should be the focus for any DBC initiative.</p> <p>Without exception, those interviewed who have experience with FFOs see little hope of success in any program that tries to certify landowners one by one.</p>

FOREST SECTOR INTERVIEW HIGHLIGHTS:

NADINE BLOCK

COO OF SUSTAINABLE FORESTRY INITIATIVE (SFI)

- The SFI program operates a forest management certification standard that is generally used by larger landowners from both the private and public sectors. SFI has also focused its efforts on outreach to small and medium-sized lands, as a significant portion of fiber for forest products is sourced from those lands.
- Nadine suggested a collaboration with the SFI Forest Partners Program, Phase II of which will begin end of 2017. For further detail, please see Chapter 1, page 21.
- There could be an opportunity to introduce the DBC to the SFI community at the SFI Annual Conference that will be held September 27-29 in Ottawa, Canada.

BRETT J BUTLER, PhD

RESEARCH FORESTER, U.S. FOREST SERVICE

- The National Woodland Owner Survey is coordinated by the U.S. Forest Service research and development division and the Forest Inventory and Analysis Program (FIA). Note, "woodland" is the most widely accepted phrase used by family ownerships when describing the part of their land that is dominated by trees. Topline points for DBC and key points can be found in Chapter 1.
- FIA began in the mid-1930s to count the number of trees in the U.S. (literally). The NWOS is a part of that effort, and is the "social complement" to the FIA data study, but only started in earnest in the mid-1970s.
- Brett leads and manages the survey, the resulting data collection and the website: [Family Forest Research Center](#).
- NWOS helps federal, state and local agencies, as well as educators, industry and foresters better understand the priorities of the family forest owner.
- The survey is done on a recurring basis to ensure up-to-date information, get trends over time and discern any patterns that may occur.
- The surveys are random surveys of private forest owners across the U.S. Names and addresses are found through courthouse records and property records. The survey is mail based and has a 52% response rate.

KRISTINA DUFF MANAGER OF CERTIFICATION, AFF

- AFF, in partnership with Florida Forest Service and a forest consultant, with support from a team of stakeholders, is developing a Landscape Management Plan that would significantly reduce the administrative burden, time and costs traditionally required for a forest management plan.
- The LMP helps promote sustainable forest management and responsible harvesting among the 90% of forest owners who are not actively harvesting — an as of yet untapped market.
- It provides participating landowners access to forest certification opportunities and benefits without a significant administrative burden.
- The LMP identifies practical silvicultural options to sustainably manage family forest land in ecosystems specific to the region, and conform to the American Tree Farm System (ATFS) Standards of Sustainability and thus accepted through the PEFC chain of custody.
- It offers a mechanism, approved by forestry professionals and conservationists, for coordinating landscape-scale priorities across ownerships.
- A detailed description of how the AFF LMP could be part of a collaboration between AFF and the DBC can be found in Chapter 1, pages 10-20.

RICHARD DONOVAN

SVP, RAINFOREST ALLIANCE

- Richard received an MS in forestry and forest hydrology, and after various posts in conservation, the Peace Corps, and others, he began working on the idea of the Forest Stewardship Council (FSC). Richard was instrumental in creating the first iteration of FSC back in 1991.
- Richard was hired by Rainforest Alliance (RA) in 1992 and has been there since, heavily involved in certification, both agriculture and forest and outreach to small landowners.
- Richard is a strong proponent of “streamlined assurance” and is working with FSC and ATFS with a commitment to look at “new ways” of doing things.
- Demand for certified pulp and paper is strong. Demand for certified solid products not as strong. RA is working to bring in and diversify markets for forest products. Biomass can play a part in this diversification.
- Richard says that global agriculture serves as a strong allegory for forestry, as the global market is dominated by small farmers – coffee, chocolate, etc. One of the lessons from agriculture is that certification does not and cannot stand on its own.
- Richard discussed the AWA initiative that has a three-year timeline. RA’s ideal scenario – build on the successful AWA model and roll it out to a few additional states. Build up the combined engagement outreach, based on the characteristics of the region, forestry schools, and the companies that are present and engaged there. This is where the DBC could play a role, if the end objective is certification.



KATHRYN FERNHOLZ

EXECUTIVE DIRECTOR, DOVETAIL PARTNERS INC.

- Katie has been ED of Dovetail for 11 years (since 2006). Dovetail is a widely respected data and research provider in the forest sector, well-known for their “agnostic” and objective approach to the forest sector.
- Katie has extensive experience in the forest sector, and with forest certification. She currently serves on the board or on committee with all four certification schemes in the U.S.:
 - American Forest Foundation (AFF oversees ATFS)
 - Board of Trustees 2015 – present
 - Woodland Operating Committee 2014 – present
 - Forest Stewardship Council (Note: Dovetail Partners has been an FSC member since 2003)
 - FSC Organizational Member Representative, Environmental-North Chamber 2017 - present
 - FSC-US Working Group for Federal Lands, Technical Expert 2015 – present
 - Programme for the Endorsement of Forest Certification schemes
 - Member of Working Group 6 for Endorsement and Mutual Recognition 2016 - present
 - Sustainable Forestry Initiative
 - External Review Panel Member 2013 – present
- Katie’s view is that ATFS is the only certification that has made significant progress and has proven effective with small landholders, and even then, only a small portion of FFOs are certified.
- All other certification schemes build on the foundation established with ATFS. Even FSC’s group certification and FFO outreach has “piggybacked” on the ATFS initial work with small forest owners.
- “Almost anywhere you have an FSC certified group, it’s wrapped in with local American Tree Farm activities and outreach. One rarely finds FSC success where there isn’t precedent of ATFS.”
- Dovetail has done significant work around group certification, primarily ATFS and FSC. They assist landowners and administrators by helping to answer questions and helping them form groups. Group certification at the state level is a good example of some of their successful initiatives: Wisconsin, Indiana, Massachusetts, etc.
- A relevant example of Dovetail’s work with small family forest group certificates is in Minnesota. It includes about 20 members and represents less than 5,000 acres. More information [here](#) and [here](#).

ANDREW GOLDBERG

PROJECT MANAGER, APPALACHIAN WOODLANDS ALLIANCE (AWA), RAINFOREST ALLIANCE

- The Appalachian Woodlands Alliance (AWA) is a partnership between Rainforest Alliance and forest products companies Avery Dennison, Columbia Forest Products, Domtar, Evergreen Packaging, Kimberly-Clark, Staples, and the U.S. Forest Service.
- The AWA project launched in 2015, aims to foster sustainable forest management. Much of their work has been to bridge the relationship gap between woodland owners and mills/industry/market.
- Sustainable forest management is the goal and RA promotes certification to Forest Stewardship Council® standards as one of the options available to forest owners.
- RA has developed a program which reaches woodland owners through workshops, forester services and technical assistance.
- AWA provides landowners with free technical support for improving soil and water quality, assistance in developing forest management plans and access to consulting foresters, procurement foresters or state foresters.
- AWA has five main objectives (as found on the RA [website](#)):
 - Increasing understanding and appreciation of the inherent benefits of sustainable forest management practices among woodland owners;
 - Demonstrating the compatibility and interdependence of sustainable forest management practices with the social and economic wellbeing of local communities, healthy forest ecosystems, and values held by woodland owners;
 - Increasing the number of woodland owners actively engaged in sustainable forest management, and therefore increasing availability of sustainably produced forest products;
 - Promoting and maintaining biodiversity and healthy ecosystems, including the monitoring of indicator species like migratory birds; and
 - Accurately measuring and effectively communicating project results.
- There is potential for DBC and RA to collaborate on an initiative that mirrors what RA is already doing with the paper industry. Given the momentum they have, a ‘sister’ program could be one of the initial investments by the DBC (potentially with leveraged funds from pellet mills). See Chapter 1, page 27 for detailed information on potential collaboration.

BARRY GRADEN

DIRECTOR, SFI FOREST PARTNERS PROGRAM

- Barry leads the SFI Forest Partners® Program (FPP) aimed at growing SFI certification among landowners and mills.
- With the expected success of the first FPP, SFI is developing “Phase II,” which would begin in 2018 (and likely run for three years until year-end 2020).
- There is potential to develop a program that targets “multi-site forest certification” or group certification, which would be administered and managed by a forest consultancy or a pellet mill. A detailed description of this can be found in Chapter 1, page 22-24.

ALLISON GRATZ

DIRECTOR OF SUSTAINABILITY, ENVIVA

- The company has a combined production capacity of nearly three million metric tons of wood per year. As of May 2017, Enviva has five of its six mills certified to SBP, with the sixth expected in second half 2017. Enviva also holds Chain of Custody certification to FSC, SFI, and PEFC.
- Enviva has an Independent Management Group (IMG) in the Mid-Atlantic region which includes the woodbaskets of three pellet mills, representing approximately 8,000 acres or 3,200 hectares, all certified under ATFS.
- The IMG process does not take too long; rather, the landowner outreach to develop trust, relationships, and to educate them on the benefits of sustainable forest management and certification is what takes significant time.
- A significant challenge is that a mill potentially spends significant time and resources getting landowners certified, and in the end, has no assurance that FFOs will in turn sell biomass to the pellet mill (e.g., if a paper company comes along and pays a higher price).
- Enviva has investigated FSC group certification under the Small and Low Intensity Managed Forests (SLIMF). However the qualifications for SLIMFs under FSC are very narrow which limits the applicability of the group to the wood basket.
- Enviva is also open to managing an IMG for one or more of the sawmills from which it sources, thereby getting access to certified residuals and offering the sawmill the incentive to sell certified timber to other solid wood markets.

TOM MARTIN

PRESIDENT & CEO, AMERICAN FOREST FOUNDATION (WHICH OVERSEES AMERICAN TREE FARM SYSTEM (ATFS))

- Tom became President and CEO of AFF in 2009. Formerly, he served as the Chair of the National Parks Conservation Association (NPCA) and has extensive experience with environmental NGOs and conservation organizations. He and his family own an American Tree Farm System certified tree farm in Wisconsin.
- Tom advised that any efforts to increase certification should focus on the “parcel level,” as many family forest owners own multiple, separate parcels of forest that are not necessarily connected or contiguous (or even in the same state).
- Tom discussed several initiatives that AFF is working on to stimulate certification (see AFF proposals for detailed descriptions of potential opportunities for DBC) including:
 - Independent Management Groups (IMGs)
 - Florida Landscape Management Plan (LMP) Plan is to replicate in Alabama next
 - MOU with Drax (public)
- There is potential for an MOU with DBC. Given the relationship already established with U.S. pellet mills, an initiative with ATFS would likely get the most hectares of small FFO land certified in the shortest amount of time.

BARRY PARRISH

FIBER PROCUREMENT AND SUSTAINABILITY MANAGER, GEORGIA BIOMASS

- Georgia Biomass (GAB) sources from approximately 400 different landowners.
- GAB sources both round wood and sawmill residuals.
- Barry is looking at assisting a local sawmill in group certification, and getting them Chain of Custody certified so that certified fiber can flow through.
- GAB would be open to administering either an FSC or SFI group certification or an ATFS IMG.

KATIE RILEY

SENIOR ASSOCIATE, ENVIRONMENTAL INCENTIVES (EI)

- EI is a mission-driven for-profit company that “designs performance-driven approaches to conservation, aligning public and private sector objectives to create resilient water, land and wildlife resources.”
- Since its establishment in 2004, EI has become a leading adviser on natural resource programs and policies across the country and internationally.
- EI has not worked much in the forest sector but is interested in collaboration with the DBC. They create “Credit Exchanges” which are programmatic mitigation tools that create incentives for conserving wildlife habitat on public and private lands. These Exchanges help landowners earn revenue from their land.
- Opportunities exist where forest landowners in sensitive areas or areas where there are species of concern could develop a management plan, certify, and then work with EI to tap into the conservation credit market. See proposal in Chapter 1, page 30. More information on EI’s wildlife and land practice can be found [here](#).

DR. CARLOS RODRIGUEZ-FRANCO

DEPUTY CHIEF, RESEARCH AND DEVELOPMENT, USFS/USDA

FAHRAN ROBB FOREIGN AGRICULTURAL SERVICE, USDA

- USDA, through the United States Forest Service, supports sustainable stewardship of 830 million acres of forestland across the US, including more than 400 million acres of private land. Beyond its domestic mandate, the U.S. Forest Service is one of the most respected forestry research organizations in the world and supports sustainable stewardship of forests via technical cooperation in more than 80 countries worldwide.
- Forest sustainability is pursued through multiple channels in the United States. The U.S. has a strong system of monitoring and reporting the conservation and stewardship of its forest landscapes which provides a reasonable assurance of sustainable forest management.
- USDA cannot endorse or support the promotion of forest certification. However, they do support the promotion of sustainable forest management.
- USFS has indicated that they support working forests through sustainable forest management to have healthy and resilient forests and communities and to promote different ecosystems services including strong forest products markets.
- The USFS works closely with U.S. State-level Forestry Departments who have tremendous reach and are generally well respected among landowners. The State foresters are often involved in programs aimed at SFM and certification.

LAURIE SCHOONHOVEN

NATIONAL FOREST STEWARDSHIP PROGRAM MANAGER, USFS

- Laurie works for the US Forest Service as Manager of the National Forest Stewardship Program (FSP).
- The FSP, via State Forest Service agencies, provides assistance to forest owners where “good stewardship will enhance and sustain the long-term productivity of multiple forest resources and produce healthy, resilient forest landscapes.”
- Special attention is given to landowners in landscape areas identified by State Forest Action Plans and those new to, or in the early stages of managing their land in a way that embodies multi-resource stewardship principles.
- The program provides landowners with professional planning and technical assistance they need to keep their land in a productive and healthy condition.
- Assistance offered through the Forest Stewardship Program also provides landowners with enhanced access to other USDA conservation programs, forest certification programs, and forest product and ecosystem service markets.
- The FSP has a Memorandum of Understanding (MOU) with both ATFS and FSC. If a landowner meets the requirements of the FSP, they then meet the requirements for a forest management plan for certification processes under these two certification standards.
- A potential area of collaboration between DBC and FSP relates to its MOUS with forest certification schemes.

JOHN W. ARSENAULT

MANAGER, WOOD PELLET GROUP, QUEBEC WOOD EXPORT BUREAU

- John deals with the Quebec Woodlot Association indirectly through pellet producer members, and can help to reach out to them as needed.
- He sees potential to help the producers in the area get SBP certified, help with their paperwork, etc. That said, there are not many industrial scale pellet operations in Quebec.
- There is potential to work with John to reach out to small woodlot owners in Quebec, but the potential for them to then sell into the pellet export market is minimal.
- John added that Shaw Resources operates a pellet mill in New Brunswick where they may have access to small woodlot owners in both New Brunswick and Quebec.

GORDON MURRAY

EXECUTIVE DIRECTOR, WOOD PELLET ASSOCIATION OF CANADA (WPAC)

- Gordon has been ED for WPAC since 2008.
- Pellet producers/exporters in Canada generally use sawmill residuals and forest residuals as feedstock.
- Some of the Atlantic provinces have smaller, privately owned woodlots that may or may not be certified; however, the vast majority of working forests in Canada are certified to either FSC, SFI or CSA.
- As our conversation ended, Gordon wanted to reiterate that the Canadians were supportive of the DBC effort but that much of Canada's forests are already certified.

WENDY VASBINDER

MARKET ACCESS POLICY OFFICER, NATURAL RESOURCES CANADA

- Wendy works in the industry and trade division of Natural Resources Canada.
- 6% of Canada's forests is privately held by farmers, small woodlot owners and corporate owners (JD Irving and Timberwest are two of the largest private owners).
- Although only 6% of the land base is privately owned, that accounts for 20% of the volume.
- Woodlot associations are governed by provinces and are organized and managed by small woodlot owner members. These associations are able to pool their wood products in order to get better rates in the market.
- The provinces with the most active woodlot associations are the Maritimes, (south) Quebec, and (south) Ontario.
- Pellet mills that might source from small landowners would include Shaw (in Nova Scotia), and Rentech (in Ontario, where all land is SFI or Crownland) and Group Savoie (in New Brunswick).

Chapter 7: Data and Relevant Statistics on Family Forest Owners (FFOs)

This chapter provides a summary of the findings from some of the most recent information sources on family forest owners. Each section will include a “Implications for DBC” which is an executive summary for each source as it relates to the DBC Stimulation Program. Sources included in this section:

- Journal of Forestry November 2016 article, “Family Forest Ownerships of the United States, 2013”¹
- American Forest Foundation and Florida Forest Service FFO Focus Group, October 2017 (included with AFF permission, see Appendix 2 for complete report)
- American Forest Foundation report, “Southern Wildlife at Risk: Family Forest Owners Offer a Solution,” published September 2016²
- American Forest Foundation 2016 Southern Landowner Survey, Topline (used with permission from AFF)

SOURCE: FAMILY FOREST OWNERSHIPS OF THE UNITED STATES, 2013: FINDINGS FROM THE USDA FOREST SERVICE’S NATIONAL WOODLAND OWNER SURVEY³

all figures are taken directly from the NWOS Report

IMPLICATIONS FOR DBC

MAJORITY RULES	SFM ACTIVITIES	INCOME AS MOTIVATOR	AGING FFOS
<p>Family forest owners (FFOs) control more forestland in the U.S. than any other group (Figure 1).</p> <p>Any program aimed at increasing forest certification among FFOs will need to take FFO attitudes, characteristics, behaviors and priorities into careful consideration.</p>	<p>Sustainable forest management (SFM) activities (e.g., wildlife habitat, harvesting trees for personal use, reducing invasives, trail work and reducing fire hazards) were stated as the top 5 activities planned for the next five years.</p> <p>Any DBC program targeting small forest owners should focus on the benefits that certification brings that link to owner priorities of SFM, not harvesting or markets explicitly.</p>	<p>83% of FFOs do not receive any income from their forest.</p> <p>The prospect of participating in a group certification that provides them access to markets, and a potential source of income, could be a significant motivator.</p> <p>This is especially true if they do not have to manage certification directly and cost is subsidized by the DBC and partners.</p>	<p>Half the ownership is 65 years or older, and may be passing land down to heirs in the next 5-10 years.</p> <p>DBC should include in its messaging (either direct or indirect through partners) that certification, which includes a documented sustainable forest management plan, will help ensure the forest they pass on will have a roadmap for health, wildlife habitat and revenue streams.</p>

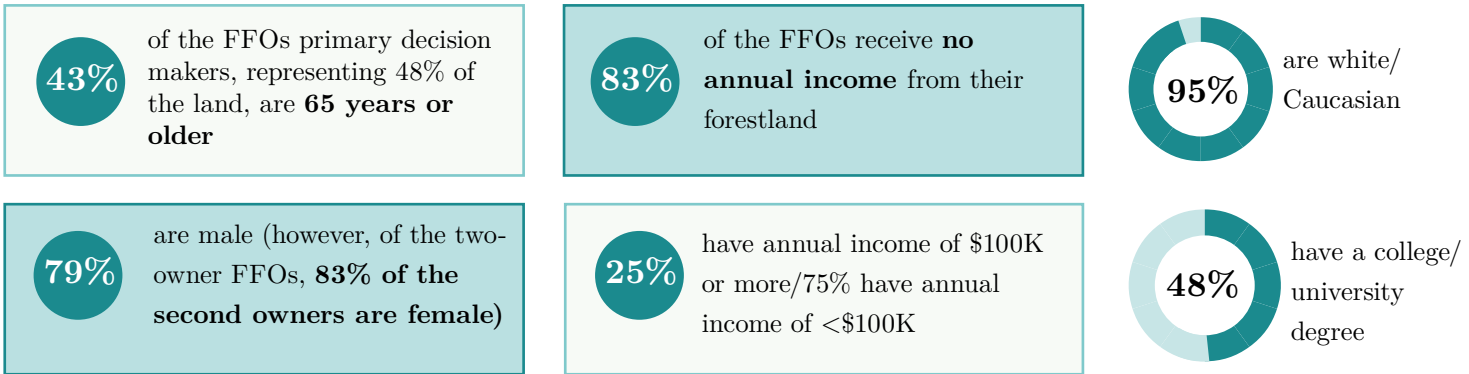
¹ Butler, B. J., Hewes, J. H., Dickinson, B. J., Andrejczyk, K., Butler, S. M., & Markowski-Lindsay, M. (2016). Family Forest Ownerships of the United States, 2013: Findings from the USDA Forest Service’s National Woodland Owner Survey. Journal of Forestry, 638-647.

<http://dx.doi.org/10.5849/jof.15-099>

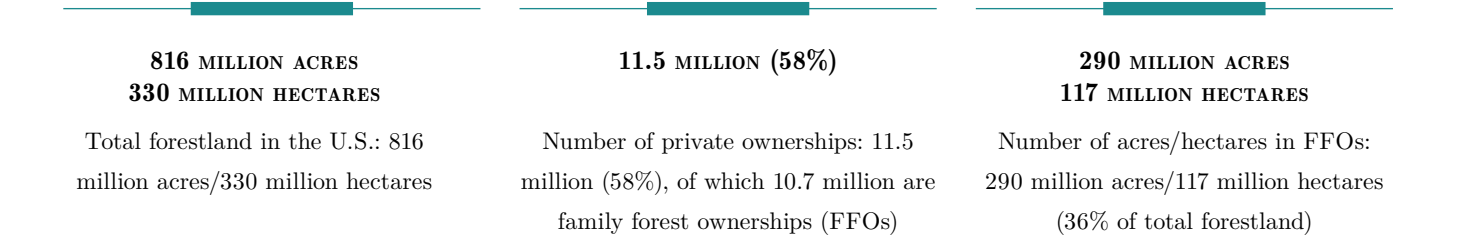
² Erwin, C. (Ed.). (2016, September). Southern Wildlife at Risk: Family Forest Owners Offer a Solution, 1-31.

³ Between 2011 and 2013, 8,576 randomly selected family forest ownerships with at least 10 acres of forestland participated in the NWOS. The overall cooperation rate for family forest ownerships was 52%. Based on NWOS analysis, nonresponse bias for survey is low with the exception of respondents being somewhat more likely to be engaged with the forestry community as evidenced through written forest management plans or having received forest management advice.

SNAPSHOT OF THE FAMILY FOREST OWNER (FFO):



KEY FINDINGS:



There are an **estimated 10.7 million family forest ownerships** across the United States who collectively **control 36% or 290 million acres/117 million hectares** of the nation's forestland. (Figure 1)⁴

There are an estimated **4.0 million family forest ownerships of 10 acres/4 hectares or more** in the United States with an **average of 67.2 acres/27.2 hectares of forest per ownership** (Figure 4) and a **collective acreage of 269 million acres/109 million hectares** of forestland.⁵

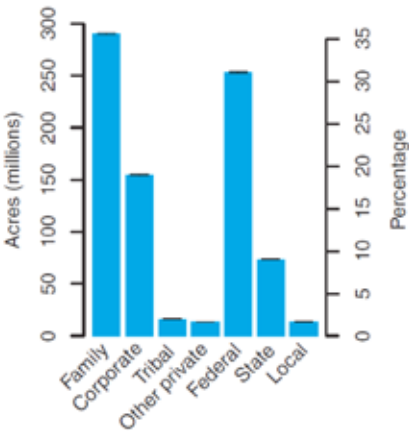


Figure 1. Distribution of forestland by ownership category, United States 2013. Error bars in this and other figures represent ± 1 SE.

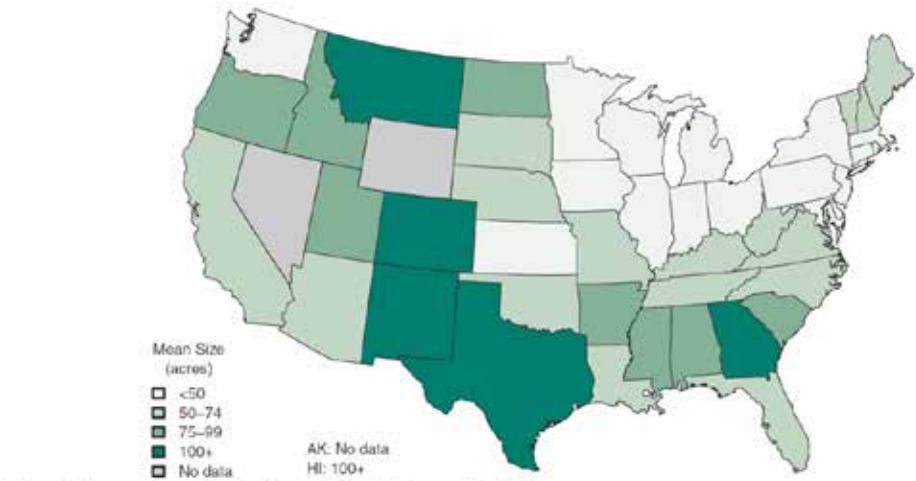


Figure 4. Average size of family forest holdings (10+ acres), 2013.

⁴All figures in this section are copied directly from Family Forest Ownerships of the United States, 2013: Findings from the USDA Forest Service's National Woodland Owner Survey.

⁵There are 6.6 million FFOs with 1–9 acres of forestland, who own 7% of the family forestland; however, these forests are not managed for forest markets as they are too small.

FFOs are active on their land; however, most are not certified or even engaged in any traditional forestry program.

Most FFOs are interested in aesthetic and amenity values (e.g., beauty, wildlife habitat, nature protection and legacy (being able to pass land on to heirs)), more than financial or market values. (Figure 6)

Eighteen percent of the FFOs, representing nearly 50 million acres/20 million hectares, indicate they will likely sell or pass on (to the next generation) their forestland in the next 5 years.

There is an increasing number of female forest owners.

Many FFOs harvest wood for their own personal use (i.e., firewood).

This activity is also correlated with other forest management activities related to wildlife habitat and recreation.

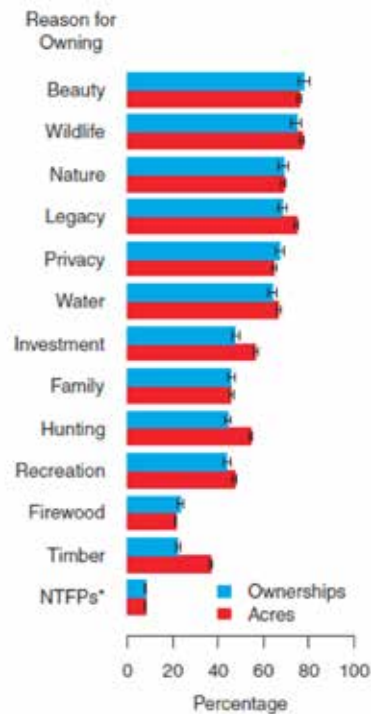


Figure 6. Percentage of family forestland and ownerships (10+ ac) by reasons for owning (includes ownerships that rated an objective as “important” or “very important” on a 5-point Likert scale), United States 2013. *NTFPs = nontimber forest products.

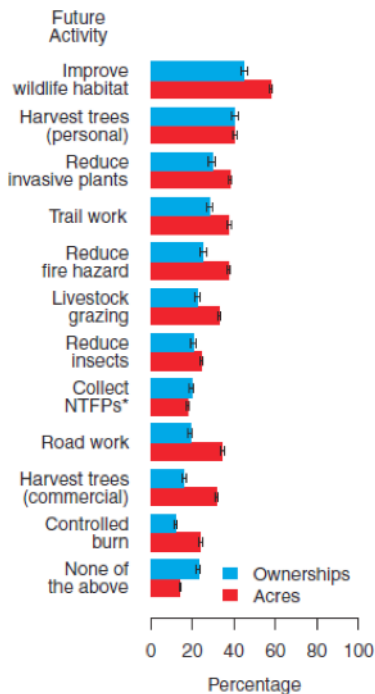


Figure 9. Percentage of family forestland (land refers to the area owned, not necessarily the area involved in the given activity) and ownerships (10+ ac) by intentions for forest-related activities in the next 5 years (includes ownerships that rated an activity as “likely” or “extremely likely” on a 5-point Likert scale), United States 2013. NTFPs, nontimber forest products.

FUTURE ACTIVITY PLANNED:

Sustainable forest management (e.g., wildlife habitat, harvesting trees for personal use, reducing invasives, trail work and reducing fire hazards) were stated as the top 5 activities planned for the next five years. Harvesting trees is low on the priority list. (Figure 9)



(See Appendix 2 for Full Focus Group Report)

IMPLICATIONS FOR DBC

UNTAPPED MARKET POTENTIAL	POTENTIAL FOR DBC TURNKEY PROJECT	OPPORTUNITY TO WORK WITH FORESTERS	CERTIFICATION AS A TOOL TO REACH FFO GOALS
<p>AFF research finds that 85% of family forest owners are unengaged.</p> <p>AFF's Landscape Management Plan (LMP), being launched first in Florida in 2017 and Alabama soon thereafter, will provide access to landowners who have previously been unengaged and largely inaccessible.</p>	<p>Consulting foresters will use the LMP to access these landowners, and then help guide them to certification.</p> <p>Currently the LMP meets all requirements for ATFS certification. See Chapter 5, page 13 for further details on AFF's LMP program.</p>	<p>There is significant distrust of strangers and government representatives.</p> <p>Foresters are seen as trustworthy.</p> <p>FFOs like the idea of getting expert advice and guidance from professional foresters.</p> <p>DBC will benefit from collaboration with professional foresters for outreach to FFOs.</p>	<p>Both engaged and unengaged landowners like the idea of having expert advice and having a means of communicating with the next generation about how to take care of their land.</p> <p>FFOs place value on having a plan that guides them where and when to do activities on their land.</p> <p>Certification provides a means of doing both. The DBC will do well to communicate the benefits of certification that resonate with these landowners.</p>

FFOS WITHOUT MANAGEMENT PLANS: KEY FINDINGS RELEVANT TO DBC

- These landowners were generally unengaged in active forest management, did not have a good understanding of the concept, and what activities it included. They did not own their land for income, instead they owned it for recreation, sport or to enjoy nature.
 - These landowners did not know what a management plan was. When the definition was explained, they liked the idea of having expert advice and saw how the plan could be useful in communicating with the next generation about how to take care of their land. They also liked the idea of having a plan that would tell them where and when to do activities on their land.
- This group had a distrust in having strangers/the government come on their land, so work would be needed to build trust.
 - Foresters were seen as trustworthy sources of information. The landowners had, in the past, valued interactions with professionals who came to their land to provide assistance and an opportunity to learn more about their land.

- These landowners valued their land for recreation or natural activities, similar to the landowners without management plans, but the difference was that they were also engaged in activities that would allow them to gain an income from their land.
- They had a strong understanding of the basic management of their land, including what activities that encompassed.
- They have ongoing relationships with professionals, see them as trusted experts, and know where to go to get more information or access resources.
- These landowners are very invested in their management plans. They use them to know what to do on their land with confidence and also as a guide for future owners. The plan helped them know they were doing the right things on their land.

SOURCE: AMERICAN FOREST FOUNDATION 2016 SOUTHERN LANDOWNER SURVEY (AUGUST 2016)

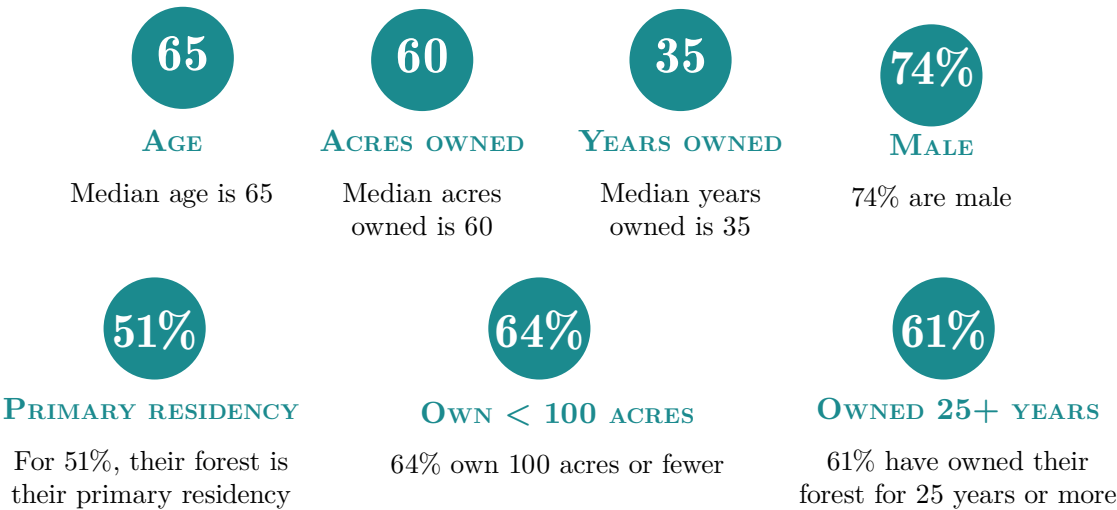
IMPLICATIONS FOR DBC

CONTINUITY CRITICAL	AESTHETIC VALUES KEY	FORESTERS (STATE AND CONSULTANT) TRUSTED	KNOWLEDGE AND RESOURCES – BARRIERS
<p>82% of respondents want to keep their forests forested.</p> <p>77% want their land to stay in the family.</p> <p>Any DBC program targeting small forest owners should focus on the ways certification can help landowners do both.</p>	<p>Similar to the NWOS survey, these findings also show that landowners’ top priorities are related to amenity and aesthetic values, not markets or revenue.</p> <p>Reasons for owning:</p> <ul style="list-style-type: none">• wildlife habitat• beauty or scenery nature or biological diversity• water resources• pass land on to children or other heirs	<p>State and private forest consultants are the most trusted among the respondents.</p> <p>The DBC should collaborate with consulting foresters to help connect with landowners and potentially administer group certification.</p>	<p>Limited resources (financial and time), lack of sources of support and lack of knowledge are all mentioned as barriers to SFM.</p> <p>DBC has an opportunity to break down all three through collaborative projects with foresters and partners.</p>

METHODOLOGY

<p>20,000 MAILED SURVEYS</p> <p>20,000 mailed surveys to 13 southern states</p>	<p>6 WEEKS DATA COLLECTION</p> <p>Data collection was April 1 - May 13, 2016 (6 weeks)</p>	<p>RESPONSE RATE: 7.1%</p> <p>Results reliable within ±2.73 at 95% confidence</p>
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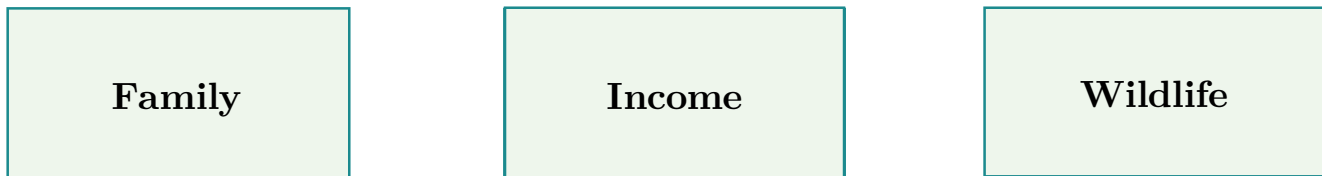
RESPONDENT CHARACTERISTICS (SIMILAR TO FINDINGS OF NWOS)



RESPONDENT VALUES AND PRIORITIES

- 82% want their land to stay wooded and 77% want the land to stay in the family.
- 64% are willing to cut trees to improve wildlife habitat.
- Top 5 reasons for owning the land (in order):
 1. To protect or improve wildlife habitat (87.2%)
 2. To enjoy beauty or scenery (87%)
 3. To protect nature or biological diversity (86.4%)
 4. To protect water resources (83.7%)
 5. To pass land on to my children or other heirs (82%)
- Among those who are most trusted for reliable information on improving and enhancing wooded land:
 - State Forest Service (37.8%)
 - Private consulting forester (33.8%)
 - University/County Extension (33.1%)
 - U.S. Forest Service (25.9%)

OPEN-ENDED RESPONSE THEMES FOR LANDOWNER GOALS FOR WOODED LAND INCLUDED



OPEN-ENDED RESPONSE THEMES FOR BARRIERS TO MANAGEMENT INCLUDED



Chapter 8: Summary/Conclusions

The family forest owner in the U.S. is the primary focus of this research and report. He or she is fiercely proud of the land, the family heritage that it often represents, and the sustainability and health of the forest. This owner is also suspicious at best, and disdainful at worst, of any individual or organization that tries to prescribe or dictate what the landowner should do with the land. This landowner is much more concerned about making sure the forest stays in the family, that the wildlife on the land is healthy and thriving, and that the forest itself will remain intact into the future.

This is the starting point of the DBC Stimulation Program. While the prospect of convincing this landowner to get certified may seem daunting at first, it is not impossible. Given the DBC's sincere willingness to put forth funds and effort to help stimulate certification, and the existence of several, well-respected organizations that have programs already in place or capabilities to put programs in place, the prospect begins to look more hopeful.

Based on the extensive primary and secondary research contained in this report, it is clear that the DBC SP can most effectively approach their goal of increasing forest management certification among small forest owners through investing in a combination of projects and initiatives, with multiple organizations. Interviews with forest stakeholders surfaced multiple initiatives that could be an excellent fit for the DBC SP. These stakeholders, and their respective organizations, are part of a strong North American network that works to support and encourage sustainable forest management.

Included in this report are distinct proposals submitted by the American Forest Foundation, the Sustainable Forestry Initiative, the Forest Stewardship Council, the Rainforest Alliance, and Environmental Incentives. These are five well-respected organizations that either have programs already in place to increase forest certification and promote sustainable forest management, OR have programs that are analogous to a potential collaboration with DBC to achieve that objective. The Stimulation Program will do well to begin investment and project discussions with some or all of these organizations as soon as possible, especially those with turnkey initiatives, given the lead times required for any of the proposals. Additional first steps that are critical to the success of the Stimulation Program include engaging a North American Manager and Communications Professional, for on-the-ground administration, marketing and communications of the program.

In summary, regardless of which organizations the DBC chooses to work with, the primary thrust of ANY program that the DBC supports should be to minimize the barriers to FFO certification, and make it as seamless as possible for FFOs to get certified. Secondly, through its support of organizations that are already on the ground, the DBC and its partners must focus not on the act of certification itself, but the co-benefits of certification (e.g., wildlife management, access to professional foresters, being part of a community of landowners nationally, access to communications and marketing channels, etc.). The DBC and its partners will need to focus on setting up the structures and incentives that will reward their partner organizations (e.g., state committees, pellet mills, consulting foresters, associations, etc.) for innovating around the question of FFO certification in relevant woodbaskets and offering real, tangible and long-lasting benefits to the landowner.

Glossary of Terms

Terms and definitions sourced from USFS, WWF, UN FAO, SFI and NCFA.

AUDITOR

A person with the competence to conduct an audit (e.g., ISO 19011:2002, 3.8).

BEST MANAGEMENT PRACTICES (BMPs)

A practice or combination of practices for protection of water quality that is determined by a federal, provincial, state or local government or other responsible entity, after problem assessment, examination of alternative practices and appropriate public participation, to be the most effective and practicable (including technological, economic and institutional considerations) means of conducting a forest management operation while addressing any environmental considerations.

BIOLOGICAL DIVERSITY, BIODIVERSITY

The variety and abundance of life forms, processes, functions and structures of plants, animals and other living organisms, including the relative complexity of species, communities, gene pools and ecosystems at spatial scales that range from local to regional to global.

CONSERVATION

1. Protection of plant and animal habitat. 2. The management of a renewable natural resource with the objective of sustaining its productivity in perpetuity while providing for human use compatible with sustainability of the resource.

FAMILY FOREST AND WOODLAND OWNERSHIPS

Families, individuals, trusts, estates and family partnerships that own forest or woodland.

FOREST CERTIFICATION

A mechanism for forest monitoring, tracing and labeling timber, wood and pulp products and non-timber forest products, where the quality of forest management is judged against a series of agreed standards.

FOREST HEALTH

The perceived condition of a forest derived from concerns about such factors as its age, structure, composition, function, vigor, presence of unusual levels of insects or disease, and resilience to disturbance.

FORESTLAND

Land at least 120 feet (37 meters) wide and at least 1 acre (0.4 hectare) in size with at least 10 percent cover (or equivalent stocking) by live trees including land that formerly had such tree cover and that will be naturally or artificially regenerated. Trees are woody plants having a more or less erect perennial stem(s) capable of achieving at least 3 inches (7.6 cm) in diameter at breast height, or 5 inches (12.7 cm) diameter at root collar, and a height of 16.4 feet (5 meters) at maturity in situ. The definition here includes all areas recently having such conditions and currently regenerating or capable of attaining such condition in the near future. Forestland also includes transition zones, such as areas between forest and non-forest lands, that have at least 10 percent cover (or equivalent stocking) with live trees and forest areas adjacent to urban and built-up lands. Unimproved roads and trails, streams, and clearings in forest areas are classified as forest if they are less than 120 feet (37 meters) wide or an acre (0.4 hectare) in size. Forestland does not include land that is predominantly under agricultural or urban land use.

FOREST MANAGEMENT

Caring for a forest so that it stays healthy and vigorous and provides the products and values the landowner desires.

FOREST STEWARDSHIP/MANAGEMENT

A written document listing activities that enhance or improve forest resources (wildlife, timber, soil, water, recreation and aesthetics) on private land over a five-year period.

FOREST TYPE

A designation or name given to a forest based on the most abundant tree type or types in the stand; groups of tree species commonly growing in the same stand because their environmental requirements are similar. For example, North Carolina forest types include (a) pine; (b) mixed hardwood; (c) cypress, tupelo and black gum; and (d) oak and hickory.

FORESTRY

The profession embracing the science, art and practice of creating, managing, using and conserving forests and associated resources for human benefit and in a sustainable manner to meet desired goals, needs and values.

HABITAT

1. A unit area of environment. 2. The place, natural or otherwise (including climate, food, cover and water), where an individual or population of animals or plants naturally or normally lives and develops.

HARDWOODS

Trees with broad, flat leaves as opposed to coniferous or needled trees. Wood hardness varies among the hardwood species, and some are actually softer than some softwoods.

LANDSCAPE

1. A spatial mosaic of multiple ecosystems, landforms and plant communities across a defined area irrespective of ownership or other artificial boundaries and repeated in similar form throughout. 2. An area of land characterized by: • similar biogeoclimatic conditions that influence site potential; • similar historical disturbance regimes that influence vegetation structure and species composition; and • sufficient size to provide the range of habitat conditions for naturally occurring communities (except for a few megafauna with large spatial needs, e.g., wolves).

MULTIPLE-USE MANAGEMENT

The management of land or forest for more than one purpose, such as wood production, water quality, wildlife, recreation, aesthetics and clean air.

NATURAL REGENERATION

The growth of new trees in one of the following ways without human assistance: (a) from seeds carried by wind or animals, (b) from seeds stored on the forest floor, or (c) from stumps that sprout.

NONINDUSTRIAL PRIVATE FOREST AND WOODLAND OWNERSHIPS

Private forest and woodland ownerships that do not own and operate a primary wood processing plant. A primary wood processing plant is any commercial operation that originates the primary processing of wood on a regular and continuing basis. Examples include: pulp or paper mill, sawmill, panel board mill, post or pole mill.

NON-TIMBER FOREST PRODUCTS (NTFPs)

Products derived from forests other than round wood or wood chips. Examples include, but are not limited to, seeds, fruits, nuts, honey, maple syrup and mushrooms.

OWNERSHIPS

A legal entity that has prescribed legal rights over a specific resource. In the case of family ownerships, it is composed of one or more owners (i.e., individuals). Private forest and woodland ownerships—corporate, family, other private, and tribal ownerships that own forest or woodland.

PLANTING

The establishment of a group or stand of young trees created by direct seeding or by planting seedlings or plantlets.

PULPWOOD

Wood used in the manufacture of paper, fiberboard or other wood fiber products. Pulpwood-sized trees are usually a minimum of four inches in diameter.

QUALIFIED RESOURCE PROFESSIONAL

A person who by training and experience can make forest management recommendations. Examples include foresters, soil scientists, hydrologists, forest engineers, forest ecologists, fishery and wildlife biologists or technically trained specialists in such fields.

REFORESTATION

The reestablishment of forest cover either naturally or by seeding or planting of seedlings.

RIPARIAN AREA

Transition zone characterized by vegetation or geomorphology adjacent to rivers, streams, lakes, wetlands and other water bodies.

SAW TIMBER

Wood of large enough size to be used to produce lumber for construction and furniture.

SILVICULTURE

The art and science of controlling the establishment, growth, composition, health and quality of forests and woodlands to meet the diverse needs and values of landowners and society on a sustainable basis.

SOFTWOOD

A tree belonging to the order Coniferales. Softwood trees are usually evergreen, bear cones and have needles or scale like leaves. Examples include pines, spruces, firs and cedars.

STAND

A contiguous group of trees sufficiently uniform in age, composition and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable unit. Trees in a stand can be managed as a unit.

SUSTAINABLE FORESTRY

To meet the needs of the present without compromising the ability of future generations to meet their own needs by practicing a land stewardship ethic that integrates reforestation and the managing, growing, nurturing and harvesting of trees for useful products and ecosystem services such as the conservation of soil, air and water quality, carbon, biological diversity, wildlife and aquatic habitats, recreation and aesthetics.

THINNING

A tree removal practice that reduces tree density and competition between trees in a stand. Thinning concentrates growth on fewer, high-quality trees, provides periodic income and generally enhances tree vigor. Heavy thinning can benefit wildlife through the increased growth of ground vegetation.

THREATENED SPECIES

Any species that has been classified by the U.S. Fish and Wildlife Service or a state wildlife agency as likely to become endangered within the foreseeable future throughout all or a significant portion of its range. A threatened species has declining or dangerously low populations but still has enough members to maintain or increase numbers.

WETLAND

1. Seasonally or permanently water-logged areas characterized by vegetation adapted for life in saturated/flooded conditions;
2. Wetlands can be forested, shrubby or open and include bogs, fens, swamps, marshes and shallow open water areas;
3. Wetlands may be stagnant systems (e.g., bogs), slow flowing (e.g., fens, swamps) or have fluctuating water levels (e.g., marshes, shallow open water).

WILDLIFE

Aquatic (marine and freshwater) and terrestrial fauna.

WOODLAND

Land at least 120 feet (37 meters) wide and at least 1 acre (0.4 hectares) in size with sparse trees capable of achieving 16.4 feet (5 meters) in height with a tree canopy cover of 5% to 10% combined with shrubs at least 6 feet (2 meters) in height to achieve an overall cover of greater than 10% of woody vegetation. Trees are woody plants having a more or less erect perennial stem(s) capable of achieving at least 3 inches (7.6 cm) in diameter at breast height, or 5 inches (12.7 cm) diameter at root collar, and a height of 16.4 feet (5 meters) at maturity in situ. The definition here includes all areas recently having such conditions and currently regenerating or capable of attaining such condition in the near future. It does not include land that is predominantly under agricultural or urban land use.

Sources

Links to website sources used in the general research and drafting of this report:

American Forest Foundation
Environmental Incentives
Family Forest Research Center
Forest2Market
Forest Landowners Association
Forest Stewardship Council (US)
National Association of State Foresters
Rainforest Alliance
Society of American Foresters
Southern Group of State Foresters
Sustainable Forestry Initiative
US Forest Service, Forest Inventory and Analysis (FIA)
US Forest Service, Forest Stewardship Program
US Industrial Pellet Association