Through timber construction, there is a future in which forests can support cities and, in return, cities can support forests. As the global population increases, particularly in cities, the construction sector is expected to exponentially grow in order to accommodate the demand for housing and other infrastructure. Current construction techniques are a significant contributor to the global climate crisis and urgently need to be transformed. By substituting the carbon-intensive materials commonly used in construction with forest economy biomaterials, such as wood and bamboo which sequester carbon, we can create buildings with reduced carbon emissions. However, this timber construction industry is still in its nascency and there is a need to address its market gaps and leverage opportunities to accelerate its development and increase its uptake.

These interventions for the mass timber construction industry can be segmented into seven main categories of solutions that affect the value chain and enablers of the ecosystem. Through various internal and external discussions, Climate Smart Forest Economy Program (CSFEP) has categorized potential solutions as relating to i) Finance and insurance; ii) Product and process certifications; iii) Communication and awareness building; iv) Timber knowledge ecosystem; v) Forest management and timber policies; vi) Value chain linkages; and vii) Timber-based real estate. The proposed solutions can be executed as for-profit, philanthropic, or blended ventures, with the services developed as individual offerings or paired with complementary services in a single offering. Additionally, while some solutions may be set up as a free-standing entity, other solutions may be similar to services provided by existing actors in or adjacent to the CSFE sector. In the case of the latter, it may make sense to approach these existing providers as potential partners to find a suitable and effective home for needed services.

**PRODUCT AND PROCESS CERTIFICATIONS**

Across the climate-smart forest economy (CSFE) value chain, actors would benefit from mechanisms to ensure the quality and sustainability compliance of the products they buy and sell. However, the sectoral standards for the sector are not yet harmonized, there are no standards that quantify and certify the impact of embodied carbon in sustainable wood buildings. Additionally, there are misplaced concerns that the quality of mass timber buildings degrades over time, and many stakeholders in the ecosystem would benefit from a form of quality surety across the value chain.

Developing a CSFE certification or mark of integrity would create standard criteria and benchmarks on the social and environmental impacts across the 3S framework from a credible authority. All activities and products from CSFE actors can be measured against this organization. Offering a certification or mark of integrity would provide recognition and an incentive to adhere to climate-smart forestry and construction practices. The certification would aim to:

- Ensure that all CSFEs and CSFE actors are meeting a certain level of sustainability or are striving toward the benchmark
- Provide verification and a mark of integrity that CSFE actors are implementing pre-determined and agreed-upon standards and safeguards adequately
- Provide a mark of integrity that CSFE products meet set standards across their lifetimes
- Categorize CSFE actors and products by the level of social and environmental impact they are having

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1 The 3S Framework (carbon Sink, carbon Storage, and biomaterial Substitution) quantifies carbon benefits and tradeoffs along forest economy value chains. Refer to the Climate Smart Forest Economy Program for more
The appeal for this certification is twofold, actors could use the mark of integrity for marketing their sustainability within their networks and this accreditation could be used to build a quality-assured marketplace. This would make certification aspirational for ecosystem players, they would be encouraged to increasingly invest in sustainability. The 3S Framework would be the critical foundation of this certification, as a publicized tool it would grow and develop to promote sustainable practices, allowing it to add more value for the market players.

In order to meet its objectives, the certification would need to develop standards to benchmark forest economy actors, and audit the indicators for quality and climate-smart practices. The organization that takes ownership of the certification could charge for initial verification and for recertification to sustain itself. The certification would aim to:

- Develop industry-wide certifications and standards to benchmark forest economy actors’ activities and impact against criteria around wood sourcing, forest management, wood processing, waste management, livelihood impacts, carbon emissions, carbon sequestration, carbon storage, biodiversity impact, etc.
- Develop and audit standards against which wood and timber products are measured, for carbon impact and quality over their lifetimes
- Develop blockchain solutions to track and maintain transparency across the supply chain

If you would like to know more about forest economy certification, you can reach out to FSC, Gold Standard, or Verra.