Climate Positive Forest Products

Scoping Dialogue, April 26 2021

Day 1 Breakout Session

The Forests Dialogue

Stakeholder Perceptions, Breakout Session 1

Opportunities

- Degraded lands in the global south are a space to manage forest and ag lands toward timber
- Recycled wood as bridge between biosphere and technosphere: important part of solution, not only virgin wood

Concerns

- Most challenges are social in nature
- Rethinking how wood supply is used requires a look at existing supplies
- Equity across nations must be addressed.
- Is new urban growth good?
- Biodiversity loss and forest degradation

Considerations

- Need to think beyond carbon to other ecological functions impacted when timber is harvested (biodiversity, water resilience, other resources ecological functions)
- At what scale and level are we looking at? Consider full system not an individual stand or city level
- large scale societal problems must be factored into this conversation.
- Market certification could flexibly address demands of large timber - there is an urgent element to this

Remaining Questions

- How we can use data to build trust? What do we need to build trust? Who? What data? : Are specific disagreements over the data or lack of data?
- Are we sure mass timber is the economic benefit to invest in?
- What forest types are best for mass timber production?

Stakeholder Perceptions, Breakout Session 1, *Continued*

Opportunities

- Opportunity to frame issues to get public buy-in
- Dynamics between geographical regions, interacts with trends in afforestation
- Staying regional + focus on domestic forest industries
- Policy (ex. building codes) to drive industry
- opportunity to share information in an equitable manner to scale up information dissemination

Concerns

- Permanence issues within life-cycle
- Continued demand around city centers
- How to build capacity in value chain to process mass timber, recognize bottlenecks in forestry
- Market readiness
- Path dependency, need for significant changes to manufacturing to shift to mass timber
- Forest governance in supply countries

Considerations

- What forest types are we sourcing mass timber from?
- Changed demand for office buildings due to pandemic
- Waste reduction for new construction
- How can we reduce demand in other areas of construction sector
- Ethical sourcing decisions
- Create space and partnership by recognizing sustainable forestry changes

Remaining Questions

- What is being developed in new technologies now?
- How to make ethical sourcing decisions?
- How to link mass timber to both climate change and biodiversity?
- How do we address these issues in time to meet the demands to mitigate climate change?

Stakeholder Perceptions, Breakout Session 1, *Continued 2*

Opportunities

- More sustainable growth models lie in public collaboration
- Architecture is excited about shift in material choices if certification schemes become more dynamic.
- Restoration in the global south should benefit communities
- Demand is a powerful force but must come the right way. Conversations with NGOs immediately, even though forest actions are forthcoming
- Restoration and wood recycling will be downstream sectors to build out

Considerations

- How mass timber can meet structural demands from disasters.
- Missing consideration on timber harvesting concerns
- Should we increase forest harvesting- differences in ecology-Management comes down to micro ecological biome considerations
- Importance of working across sectors
- Upfront higher cost and public perception around forests and wood rather than other building materials
- Need for guidelines and definitions
- Where will the need for building stock come from? What does that demand look like in the global south

Concerns

- Up to forestry sector to get this right, past history shapes public perception
- Public can be an economically bad actor
- Gaining social license to build solutions across
- For demand side, costs more important than carbon
- Current fuel wood uses in africa
- Recognize need for innovation in material and energy access
- Environmental and social risk must be managed

Remaining Questions

- Do we all have to agree on the import of biodiversity to move fwd with mass timber?
- Can we enfranchise smaller players in supply and construction sectors?

Additional Notes/ Comments

As northern populations aren't increasing, the real need for increased housing is in the global south. If low-level housing continues, cities spread along with land conversion.

Broader housing issues are policies that result in money laundering to build up (highrises)

Social housing policies toward gentrification, money laundering, and zoning are the concern for the future of mass timber.

Conversation on 'Degraded lands' can concentrate around the global south despite lands in the global north being already degraded.

Asserted indigenous land rights need to be recognized by federal policies.

The Forests Dialogue

Climate Positive Forest Products

Scoping Dialogue, April 28 2021

Day 2 Breakout Session 1

Each Groups decides a theme to discuss between:
1 - Forest Health, Ecosystem services and Biodiversity Considerations.
2 - Forest + Landscape Management
3 - Climate Change Mitigation (and projections)
4 - Social Considerations

Guiding Questions:.
1)What challenges and risks need to be considered in this theme as it specifically relates to using mass timber to mitigate climate change?
2) What are the remaining questions and gaps in Knowledge?

Mass Timber Impacts on Forests, Climate Change, and Society

Group 1

Challenges and Risks

- urgency/time scale - we don't have the typical time to build consensus and coalition due to urgency of climate change
- We need more stakeholders in this and other dialogues on this topic
- Geographic nature of forestry/supply/demand
- Managing for timber "vs" other forest values
- Need to think holistically - not just about what we are constructing with, but need to consider level/amount of construction overall. I.e. is the new construction needed?

Remaining Questions and Knowledge Gaps

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Other

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Mass Timber Impacts on Forests, Climate Change, and Society

Group 2

Challenges and Risks

- The damage that could result if we stop thinking objectively about challenges and risk and become too wrapped up in cheerleading
- How things can go awry if we do not unpack the nuances in different regions, including not only the ecological realities and species grown, but also the social (norms, etc.), financial (insurance, credit), economic (property rights) and environmental (regulations) institutions that are in place.
- Managing a topic that can bring up a lot of emotions (esp. with regards to land management implications).

Other

- Getting the chain of custody right so that can inform the end consumers
- Increased use of wood from the US within US construction allows for conversations with individuals about the environmental impact of construction inputs in a way that concrete or steel that are imported (and therefore environmental damages are out of sight) do not allow

Remaining Questions and Knowledge Gaps

- Consider the degree to which increased demand can be offset by improved efficiencies and the policies and incentives that can be used to support those efficiencies & where additional demand is going to come from.
- Species that are appropriate and how they might be integrated into agroforestry systems or used on degraded lands for win-win situations across the globe.
- The relative risks of seizing the mass timber opportunity in an imperfect manner (higher cultural or biodiversity costs?) vs waiting (higher climate costs?)
- The need to redesign timber markets so that there is an efficient allocation of wood to their highest value end use, and that needs to account for carbon and include the reuse/recycling of wood
    - Hierarchy of decision-making that uses the least-carbon intensive option that meets the product needs first
    - The policy and economic signals required to support this

Mass Timber Impacts on Forests, Climate Change, and Society

Group 3

Challenges and Risks

- **Acknowledging uncertainty -** “Our desire for certainty around forest carbon mitigation is unrealistic expectation given what we are trying to compare and contrast.”
- **Interlinkages and complexity of analyzing stand alone forests or as part of the broader economy and landscapes of which they interact -** This all falls apart when we try to understand forest systems as if they are a thing that is separate from food systems, energy systems - all these systems are connected
- **Transparency in supply chain will be a challenge -** Outside North America Context, high level challenges around uncertainty in accounting or mitigation potential or social license to use wood or confidence without having more transparency in wood supply chains. Environmental product declarations are needed. This has taken wood industry by surprise but is critical for obtaining high resolution for carbon accounting.

Remaining Questions and Knowledge Gaps

- **Will scaling squeeze us to simplify the supply chain and forest management?**
- **Natural vs. built environment long term storage of carbon?** Is this a fair comparison. How much goes into buildings that would otherwise be kept and change on the land? 10%? 80%?

Other

- **#Knowledge Gaps in LCA in land management:** there is another whole conversation about trying to acknowledge that LCA for wood products does not account for land management. Ecosystem services and social considerations need to be included - these are not incorporated in product level accounting. It’s often phrased as uncertainty.

Mass Timber Impacts on Forests, Climate Change, and Society

Group 4

Challenges and Risks

- Although forests aren't managed for mass timber their is an opportunity to stimulate a connection with forests - how do we bridge communication between demand and supply and know that it has a positive impact on biodiversity
- **The challenge is how to match how to bridge the realities of forest management now and into the future (adaptation, specific species (ash, hemlock, wood beetle blue stain) in a way that can be a positive contribution to sustainable mass timber construction**
- Co-create symbiotic evolution of how forests are evolving and managed and match with stimulated demand for mass timber
- How can mass timber demand be an asset for adaptive, regenerative forest management perspectives?
- Challenges of insects, disease, fire and co-development of mass timber
- Wood origin and utilization of species that may not be popular with consumers but need

Other

- Opportunity to evolve two systems together and bridge the conversation ina symbiotic way

Remaining Questions and Knowledge Gaps

- real question is where does the wood come from?
- If trying to hone in on biodiversity impacts, how much latitude do architects have to use any species you want (from biodiversity perspective) vs. the species that some clients may want
- What kind of species can we expect to see? What do we have to manage on the demand side so architects can learn to be more nuanced?
- What part of the forest management plans can we (architects) learn to be attentive to?

Mass Timber Impacts on Forests, Climate Change, and Society

Group 5

Challenges and Risks

- Neutrality across materials --- there is an importance of not being in our silos, we need to collaborate, as buildings are not made purely of one material
- We need to be careful about over-simplifying the role of forests as just a “carbon pump”
- Urgency -- We cannot wait for perfect information; how do we focus on scenario work to be realistic about risk vs. understanding everything

Other

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Remaining Questions and Knowledge Gaps

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Mass Timber Impacts on Forests, Climate Change, and Society

Group 6

Challenges and Risks

- Uncertainty in the science delays communication with the public and policy making
- How to model across industries and communities?
- Challenging to target purchasing based on social and environmental climate impacts
- No enforcement even if global community agrees on standards and protocols
- Agreeing on definitions and measurements for carbon accounting

Take aways

- Need to be risk averse and cautious in communicating
- Act on what we currently know
- Need to keep flexible strategy that accounts for variability and changes in science

Remaining Questions and Knowledge Gaps

- Where do you stop carbon modeling? Do you account for storage?
- Effective carbon modeling – variability across time, space, and scale

Mass Timber Impacts on Forests, Climate Change, and Society

Group 7: Forest & Landscape Management

Challenges and Risks

- Much of the research done to date is necessary but insufficient
- Questions on upstream and downstream
- Fitting this into the 1.5 degree goal, given all the uncertainties.
- Noted ideological divide between ‘protect’ vs. ‘manage’ voices

Other

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Remaining Questions and Knowledge Gaps

- Focus on the science/letter that Peter shared earlier in today’s session, and a need to understand whether/where the debate is substantive
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The Forests Dialogue

Climate Positive Forest Products

Scoping Dialogue, April 28 2021

Day 2 Breakout Session 2

Each Groups decides a theme to discuss between:
5 - Regional variation in supply, need, and risk
6 - Supply and Market Dynamics for Timber
7 - Barriers to Scaling up Mass Timber Industry
8 - Built Environment and Demand

Guiding Questions:.
1)What challenges and risks need to be considered in this theme as it specifically relates to using mass timber to mitigate climate change?
2) What are the remaining questions and gaps in Knowledge?

Mass Timber Supply, Demand, Markets and Barriers

Group 1

Challenges and Risks

- Rural economic development potential of mass timber for building political, societal support
- Access to finance and capital and manufacturing infrastructure is needed to scale. We need to invest thoughtfully in this capacity and use mass timber as a rural economic lever, and use subsidies to do that. And as we do that, be inclusive and equitable in where rural econ. development benefits go
- Forestry industry needs to modernize and become more efficient

Other

- Mass timber is really an innovation challenge - one that needs to be undertaken with attention to energy, food systems, building, other. We need innovation to disrupt current construction system.
- Importance of local specificity to cultural norms, ecological contexts - need to take a granular look

Remaining Questions and Knowledge Gaps

- How to incorporate western resource management frameworks and indigenous perspectives?

Mass Timber Supply, Demand, Markets and Barriers

Group 2

Challenges and Risks

- Messaging to the public is a challenge, given the uncertainty of many aspects of the environmental impacts of mass timber. This can lead to contradictory messages and confusion.
- Challenges with scale at many steps including:
  - Limited understanding of profitability for manufacturers
  - Hesitance of the financial sector: banks, investors, appraisers, insurers
  - Limited skilled labour (e.g., Canadian framing crews working in USA)
  - Education and acceptance by engineers and architects
  - Social norms and acceptance of wood construction by end users
- Transparency of data for LCA work and also confidence in the data (greater problem in some countries than others)

Other

- Accessibility of LCA style analysis for firms

Remaining Questions and Knowledge Gaps

- Understand *how* to support scaling up and what incentives or mechanisms can be used to overcome the challenges.

Mass Timber Supply, Demand, Markets and Barriers

Group 3 – #5 *Regional Variation in Supply, Need, and Risk*

Challenges and Risks

- **“designers are beginning to think more deeply about where materials come from and implications for global supply chains, and landscapes of extractions and EJ concerns"**
- We are seeing a call for industries to reckon with “out of sight” landscapes of extraction that are connected with all industrial materials.
- *“ In my opinion Amazon should be protected as it is and should be used for other values/products other than wood”* and timber products should be produced in other areas.

Knowledge gaps

- **What scale of resolution** is important to communicate to designers or other actors?
- **Present vs. Future scenario modeling** Its a struggle to compare carbon of products now. But will also be a struggle to compare carbon of products in the future (e.g. with hydrogen steel).

Remaining Questions and Knowledge Gaps

- **Where to protect forests vs. where to produce?** In North America we think our forests are more special than someone else’s. Where are forests best suited for protection vs. production? Continuum of protection and production forestry.
- **Land tenure variability** - do we need additional clarity where silvicultural practices will happen vs. where forets will be “left alone” - is that ambiguity out there something that will be reconciled sooner rather than later.

Mass Timber Supply, Demand, Markets and Barriers

Group 4: Supply and Market Dynamics

Challenges and Risks

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  - Logistics of where building needs are vs. processing capacity vs. material availability
  - Trade offs between local and global
  - **Need for developed, formal industry in developing nations, if processing capacity is to be aligned with local building needs we must recognize the equity challenge around a formal industry that is needed to produce this timber**
  - Challenges around the market dynamics for carbon credits as influencers - can it incentivize timber use? Where is it traded? Who gets to claim the carbon benefits? Where does it land from both the forest side and the building side?
  - **We can't look at mass timber in isolation from other forestry products, there is a data gap on what increased demand for mass timber may have on these other products**
  - Forest ownership, management, and financing
  - Intertwined relationships across the industries, we can not influence timber in isolation
  - Polices, markets, and societal appreciation can guide finding the balance

Remaining Questions and Knowledge Gaps

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Other

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Mass Timber Supply, Demand, Markets and Barriers

Group 5, Topic #5 Regional Variation in Supply, Need, and Risk

Challenges and Risks

- In considering the establishment of First Principles - It won't boil down into a simple index that levels the playing field, there are equity concerns - a common accounting system helps, but won't account for all the variation
- Wary of broad policy decisions that may have perverse impacts that we may have not thought of (e.g. biodiversity impacts)
- There's only so much builders can keep in their head about procurement decisions, and it is a lot to navigate for architects

Other

- Missing in the discussion: Poverty, development, and the socioeconomic impacts of forestry and mass timber development
- Why is it not economically viable for us to conduct restoration that not only restore for industrial use but also for diversity, ecology, and land amelioration?

Remaining Questions and Knowledge Gaps

- What are some common themes that bind us between regions?
- What can we establish and discuss as First Principles? In terms of identifying an hierarchy of options for lowest carbon option as well as a lowest risk option (e.g. avoidance of sources with labour, FPIC concerns)
- The need to take a long-view of the role of forest management

Mass Timber Supply, Demand, Markets and Barriers

Group 6

Challenges/risks:

- Wood supply and forest degradation is a global issue but can disproportionately affect some places more than others
- Issues enforcing sustainable timber production, especially when there is a great demand
- Public perception that wood use is negative, so proposals to utilize mass timber is controversial and risky
- Challenges in localizing production

Knowledge gaps:

- Apparent knowledge gap amongst the public about pros and cons of wood compared to steel and concrete

Main takeaways:

- Specificity of place or locality
- Global north and south have these issues
- Importance of time
- Adoption curve that needs to occur
- Importance of being bold with these assertions
- Caution for local- global continuum

Remaining questions:

- How much new building is needed?
- How does the global south participate in positive ecology and positive development?

Mass Timber Supply, Demand, Markets and Barriers

Group 7: Built Environment and Demand

Challenges and Risks

- End of life questions: lots of uncertainty but we need to begin planning for it now.
- Risks around expansion of building into Global South
- Spoke about performance/risks of particular adhesives, materials, etc.
- Need to acknowledge multiple circular economies (forest management, manufacturing process, building process)

Other

Remaining Questions and Knowledge Gaps

- End of life questions
- Map of species availability and where the buildings where actually go up. Where will demand be met from? Shipping from far away will reduce climate benefits. Where will harvesting not/threaten forest health?
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Climate Positive Forest Products

Scoping Dialogue, May 3 2021

Day 3 Breakout Session

The Forests Dialogue

Solutions, Strategies to Address Challenges, and Actions

Group 4: Urbanization, Buildings and Demand

- **Re-frame the Narrative of Mass Timber and Forest Products towards Climate Change**
  a. Communicate Existing/Past Efforts - To reduce barriers to acceptance and understanding
  b. Financial constraints - options to fund communications from corporations facing brand risk (e.g. Google, Amazon, Microsoft to overcome concrete and steel advertising)
  c. Public Policy - public grants and R&D to move the needle
- **Accessible Evaluation Framework/Decision-Making Tool to Facilitate Green Building**
  a. Important considerations: Bridging the “Designer-Forester” Divide and Accessible, Data-Informed, Trustworthy
  b. Insurance and incentives
  c. Certification - Green Building Standards - Materials evaluation, Linkages between Forestry-Green Building Certification, Improve design community’s understanding of progressive forestry standards
- **Regional Specificity**
  a. Related to all the above strategies
  b. Have dialogues at regional level
  c. There is no “One Size Fits All” approach

Solutions, Strategies to Address Challenges, and Actions

Group 3: Social Considerations

- **Solution 1 - Utilize and improve upon inclusive assurances, safeguards, and certification**
  a. Maximizing biodiversity and alternative livelihood
  b. Increase the access to certifications for smallholders and indigenous communities to access certification
  c. Safeguards for how to work with indigenous people (consent guidelines - free, prior, and informed consent etc.)
  d. Creating market demand for certification
- **Solution 2 - Creating and optimizing new and existing benefits of the forests for the local communities**
  a. Utilizing by-products of forests to come up with new products and services to empower the communities (e.g. monetize the sequestration of carbon and expand the revenue stream)
  b. Increase the cascading use of wood products (e.g. timber, fuel wood, etc.)
  c. Ecosystem services measurement tool - measure other co-benefits and other types of value from forest
  d. Sustainable intensification - maximize not just timber, but all of the benefits of forests
  e. Developing livelihood for the local communities and creating incentives for keeping the forests v.s. Going into other land uses
  f. Seize the opportunity to create better housing for local communities
  g. Data on social impacts
- **Solution 3 - Build inclusive & trust-based coalitions with other sectors/stakeholders to support landscape-level solutions**
  a. Clearly established land tenure to avoid risk and conflict; recognizing different types of land tenures that are applicable in different contexts
  b. Aggregation / Co-operatives to allow smallholders / communities to link smallholders with value chains
  c. Knowledge transfer, learning community (e.g. professional societies in the US) to address knowledge gaps (e.g. Publicly available information on the economic benefit of trees)
  d. Proof of concept of wood use / innovation
  e. Trusted relationships building between companies and local communities → social license
  f. Act with seven generations in mind

Solutions, Strategies to Address Challenges, and Actions

Group 2: Forests

- **Solution 1:** Align buildings with social dimensions - urban development and social housing, opportunity with value chain development and restoration, bring in other perspectives to make sure mass timber is used in highest, best use.

- **Solution 2:** Claims and analysis - reduce greenwashing, decide how to rigorously assess claims, narrow the gap for more objectivity. Data may be absent around embodied carbon.

- **Solution 3:** Role of prototypes - build prototypes for how to push the boundary on use of mass timber. This includes prototypes for forest procurement and education around forest management. Work through examples, making connections and challenging perceptions.

Solutions, Strategies to Address Challenges, and Actions

Group 1: Climate

Solution 1 Leveraging mass timber to boost forest sector investment, possibility to increase forest cover and land-based carbon storage

- Investment in EVERY dimension of the forest sector, not JUST the forest product sector
- Core principle is that innovation requires investment to grow and we are at a point with mass timber. We need to move beyond the pilot stage and move toward something with multiple benefits (social, ecological, etc.)
- There is an opportunity to research and provide additional background research

Solution 2 Goals of diversity of land uses for both conservation & production - while recognizing strong social and cultural concerns

- How can the demand side support this in the short term? What are the mechanisms that we can use starting now?
    - Mitigation opportunities within the building material itself as well as sourcing
    - Culturally appropriate markets exist; opportunities for investment exist; initiatives to maintain and invest in forests exist
    - Demand side needs to understand the opportunities that are available to them
- Two things that corporations are looking at that are important considerations here: (1) frameworks for reporting GHGs and removals; (2) trying to meet science-based targets

Solution 3 Identify where and how mass timber can be part of climate mitigation targets

- Who are the trusted actors to help forestry sector and demand sector communicate about climate mitigation? Are there lessons to be learned from renewable energy?
- How can mass timber factor in? Need to consider:
    - Carbon increase via increased forest land cover & increased forest productivity
    - Incorporation of carbon within the mass timber buildings themselves (although depends on end of life) - current demand
    - Substitution with cement and steel - increased relative demand
        i. Case by case & regional analysis should be investigated alone as well as in conjunction with global analyses on the trade of timber and the implications to forests
- Comprehensive and consistent greenhouse gas accounting for the forest and wood product sector (in relation to bioenergy AND solid wood products)
    - IPCC needs to provide guidelines to governments for accounting (use international pressure to promote consistency); also provides framework for offsets (which also has additional oversight)

Solutions, Strategies to Address Challenges, and Actions

Session Summary

Solution 1: **Re-frame the Narrative of Mass Timber and Forest Products towards Climate Change**

Solution 2 : **Identify where and how mass timber can be part of climate mitigation targets**

Solution 3: **Regional Specificity:** Related to all the above strategies, have dialogues at regional level.

Solution 4: Goals of **diversity of land uses for both conservation & production** - *strong concerns about social and cultural concerns*

Solution 5: **Creating and optimizing new and existing benefits** of the forests for the local communities

Solution 6: **Build prototypes for how to push the boundary on use of mass timber.**

Solution 7: **Utilize and improve upon inclusive assurances, safeguards, and certification**

Solution 8: **Claims and analysis - reduce greenwashing, decide how to rigorously assess claims, narrow the gap for more objectivity.**

Solution 9: **Build inclusive & trust-based coalitions** with other sectors/stakeholders to support landscape-level solutions

Solution 10: Leveraging mass timber to **boost forest sector investment**, possibility to increase forest cover and land-based carbon storage

Solution 11: **Align buildings with social dimensions.** Urban development and social housing, opportunity with value chain development and restoration, bring in other perspectives to **make sure mass timber is used in highest, best use.**

Solution 12: **Accessible Evaluation Framework/Decision-Making Tool to Facilitate Green Building**