Terms of Reference
Consultant for Rubber Supply Chain Analysis, WWF- Myanmar

Supervised by: Gaurav Gupta, Sustainable Business Manager

Work location: Myanmar / Home based with substantial travel in Myanmar / possible travel to Yunnan (China)

Duration: 01 Apr 2016 – 25 Jun 2016

WWF Myanmar is looking for a Consultant to conduct an analysis of Rubber Supply Chain (originating from Northern Tanintharyi region), to identify stakeholders, farming practices, production process, value additions, buyers, traders, prices and volume – i.e. complete mapping from the left end to the right end of the supply chain, where the final product is manufactured for consumption.

1. Background

The Greater Mekong Sub-region (GMS) is one of the most biologically diverse and productive regions but its biodiversity is under enormous pressure from rapid economic development. WWF-Greater Mekong works to halt the loss of the region’s extraordinary biodiversity, and to ensure that human use of the region’s natural resources is sustainable and equitable. Unsustainable economic activity is a major driver of environmental degradation and a green economy approach embraces the management and governance of natural capital - to maintain ecosystem functioning, provision of ecosystem services and equitable access to and sharing of resources.

WWF-Myanmar was established in 2013 as part of the Greater Mekong Programme. WWF-Myanmar’s Conservation Plan is founded on implementing a ‘Green Economy’ approach in policy decisions, natural resource management and in sectors such as infrastructure and energy, and includes a focus on maintaining the ecological integrity of the globally important Dawna Tenasserim Landscape shared by Myanmar and Thailand.

Over the last few years, Myanmar has experienced a dramatic increase in deforestation. Based on a recent report by the FAO, since 2010, Myanmar has lost over 1.3 million acres (526,000 ha) of forest on average every year, placing it among the top three countries in the world in terms of area deforested per year. Deforestation diminishes important wildlife habitat, severely impacts the ecosystem services communities receive from the forest, and is a leading cause of GHG emissions globally.

Rubber is a leading driver of deforestation in Myanmar. Based on government statistics, the total area under rubber has increased to over 1.5 million acres (607,000 ha) (Source: MRPPA). The two regions with the largest area planted are Mon state and Tanintharyi. In Northern Tanintharyi, the new Dawei-Kanchanaburi road has been providing easy access to intact forest blocks which, as a result, is increasingly converted to rubber.

Currently, buyers from neighboring China appear to have a near monopoly in the Myanmar rubber market, controlling both flow and price, and squeezing the demand side as farmers don’t have an alternative to sell elsewhere. At the supply side of the chain, farming practices appear poor, not resulting
in the yields achieved elsewhere. Farm income is thus squeezed at both ends. A thorough supply chain analysis is necessary to understand the issue and make rubber a crop yielding high income per hectare and not requiring additional forest to be converted to meet market demands. This analysis will help better define WWF’s Landscape approach in the region and identify the right actors to engage and actions to take to develop rubber as one of Myanmar’s preferred crops and decouple it from deforestation.

2. **Consultancy objectives**

Provide an analysis of the rubber supply chain originating in Northern Tanintharyi

3. **Scope of work**

The study is divided into six parts. However, these six parts are interconnected and should not be performed in isolation.

A. Identify supply chain routes, geo-referenced origin, volume and destinations of rubber originating in Northern Tanintharyi (~15%)

- Identify the trade route of rubber originating from Northern Tanintharyi to destinations in Myanmar, China, Thailand, Malaysia and any other countries potentially identified by the research
- Estimate the amount of rubber going to various countries and industries, particularly the tyre industry

B. Identify and describe the value chain actors, value addition, price trends, volume trends, farming practices and incomes, market dynamics and competition (~40%)

- Identify all stakeholders - communities, producers, processors, traders, wholesalers, agents, brokers, retailers and any other - at each exchange along the supply chain and map them in a value chain schematic diagram.
- Through a step by step breakdown analysis of the value chain, identify
  - the value additions and price addition in each step
  - the origin and history of the stakeholders (after primary production)
  - who, among buyers and sellers, holds more negotiating power (bargaining power)
  - barriers to entry both at the buyer and the supplier end
  - how is the price (at each exchange) determined and how does it vary with the international price
  - how sellers choose the buyers and vice versa
  - the level of competition i.e. number of buyers and sellers at each step
- Identify the current trends on rubber expansion and associated deforestation. Identify
  - how farmers decide the area to plant rubber on and what are the community dynamics and conflicting interests on expanding rubber plantations
  - what are the policy and legal frameworks and resulting incentives/obstacles for agricultural expansion or productivity
  - what are the other incentives to plant rubber and how do they change with rising and falling rubber prices
  - how farmers receive(d) the land title, if any, for new (existing) plantation
assess for each case whether the purpose of the forest conversion to rubber was only to produce latex or whether building of a land bank of “owned” property was also a driving decision maker

- Document, in detail, the farming practices and net income (of small, medium and large scale farmers), starting from choosing/planting seeds to selling rubber sheets
  - Compare the farming practices with high yield farming practices (of Thailand) (the data about Thailand can be taken from existing documentations)
  - Compare the total cost of plantation (excluding land title cost) until tapping starts (~7 years) between Thailand and Myanmar
  - Compare the total yield, revenue, operating costs and operating income per unit area between Thailand and Myanmar
  - Compare the NPV (Net Present Value) per unit area (based on historical 10 years average real USD selling price of rubber) between Thailand and Myanmar

- Estimate the volume of rubber managed by each actor type in the supply chain. Even though some official statistics on volume are available, we require primary data, which may not be in sync with the official statistics and the aggregated amounts might vary across supply chain

C. Estimate land use and production (~10%)

Estimate the number of small, medium and large holdings. Again, the estimates should to be based on the rubber data collected and stakeholders interviewed, not directly or indirectly on the official statistics. Similarly, estimate the total production of rubber as well as the total area under plantations currently tapped.

D. Identify opportunities in the supply chain to reduce deforestation linked to rubber (~10%)

- Identify demand side opportunities to source sustainable or deforestation free rubber i.e. are end or/and intermediate buyers interested in sourcing sustainable rubber and how willing are they to pay a premium for that?
- Identify opportunities at the farming end to expand vertically (increase yield) rather than horizontally (increase area). E.g. assess the willingness of farmers to systematically start sustainable re-plantations (e.g. 15% replantation per year).

E. Identify emerging trends in the agri-business (~10%)

- Identify emerging trends in agri-business in Northern Tanintharyi
  - For which other crops/forest products will demand likely increase in the short-, medium-, or long-term future?
  - How do these trends drive or may drive deforestation

F. Prepare final report (~15%)

Prepare an interactive (with graphical illustrations and easy and intuitive navigations e.g. in the schematic value chain) and insightful report (40-60 pages), incl. a 4-6 page leaflet/executive summary (which can be printed separately) and a PowerPoint on the result of 3.A to 3.E.
4. Output and deliverables

<table>
<thead>
<tr>
<th>No.</th>
<th>Activity</th>
<th>Expected outputs</th>
<th>Date (negotiable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Identification of supply chain routes, volume and destinations for rubber originating in Tanintharyi</td>
<td>A supply chain map (we can provide a sample) from one end to other</td>
<td>15 Apr 2016</td>
</tr>
<tr>
<td>2</td>
<td>Identify and describe the value chain actors, value addition, price trends, volume trends, market dynamics and, competition.</td>
<td>A draft report with each subset of the supply chain and its attributes mentioned in point 3.B explained in detail</td>
<td>30 May 2016</td>
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<tr>
<td>3</td>
<td>Estimate land use and production</td>
<td>A 3-4 page document with projections and methodology provided in a separate section and not to be mixed with facts in other sections</td>
<td>30 May 2016</td>
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<tr>
<td>4</td>
<td>Identify opportunities in the supply chain to reduce deforestation linked to rubber</td>
<td>An opportunities section with details as described in 3.D added to the draft report</td>
<td>10 May 2016</td>
</tr>
<tr>
<td>5</td>
<td>Identify emerging trends in other agri-business</td>
<td>A separate short report on the emerging trends, highlighting 2-3 key forest products</td>
<td>15 Jun 2016</td>
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<tr>
<td>6</td>
<td>Prepare report</td>
<td>Draft report (on 15 Jun) and final report; Executive summary and a power point</td>
<td>25 Jun 2016</td>
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5. Required Profile

Essentials:
- Extensive experience in undertaking supply chain study
- 5+ years of relevant work experience
- Demonstrated understanding of forest commodities (particularly rubber). Applicants may be required to submit a copy of previous such study undertaken
- Fluency in English and experience in writing similar reports and preparing knowledge products
- Sound understanding of market forces, competition, bargaining power etc.
- Willingness to travel for weeks in the field collecting information and interviewing stakeholders
- Willingness to travel to Yunnan (China), if required
- Demonstrated experience in engaging with high level government officials, farmers, traders, and buyers of different nationalities and ethnicities

Desirables:
- Candidate based in Myanmar or with work experience in Myanmar strongly preferred
• Knowledge of Myanmar language a distinct advantage; knowledge of Mandarin added advantage
• Advanced degree in business, supply chain, agriculture or other relevant discipline
• Established network to support engagement with stakeholders required for the study