**Project Definitions of Successful NTFP commercialization:**

A detailed summary of the many different definitions of success is presented in Chapter Four of Marshall, Schreckenberg and Newton (2006). The CEPFOR project generated much data on this theme, and additional definitions of success, analysis, and methods for assessing success, are presented in the following pages.

## 1. Concepts of success identified in case study community reports

**Cocoa**
- Expanding market
- Intermediaries do not process, only transport
- Does not generate cash income but in some situations cash would arguably be of less value than basic groceries
- Predominantly undertaken by women
- Other indicators for successful production of cocoa, include: good quality; good yield; with yield levels of individual plants as indicator of success of domestication; etc.

**Rubber**
- The income it generates makes an important contribution to food, education and health.
- It is a low inversion activity that is highly compatible with other activities
- There exist good opportunities for an increase in plantation production & adding value by mechanising processing

**Incense**

- Being able to sell product as quickly as possible.

**Jipi Japa palm**

- When sell products and satisfy basic needs through the money that is generated.
- When processors (members of "CountryArt") make something that is accepted, or awarded a premium price.
- In addition, there is huge self esteem associated with participating in events, exhibitions, press coverage.

**Pita**
- People consider it a success if they can use their pita plantations as collateral to get credit –this is not exclusive to NTFPs, but also agricultural products too (maize & café)

**Mushrooms:**

- People selling w.e.f. consider it a success if it brings in enough money to send their children to work in the US.
- Product reaches a good price in the marketplace
- High, consistent demand – the concept of "producing" something that is wanted

- Oral testimony: " before, there were many mushrooms in the forest, but nobody bought them. Now, they represent a source of income because people buy them"
- That there exists demand and thus someone to buy the mushroooms (until Japanese traders sourced them the mushrooms had no market).
- Sale provides a hugely important source of income

**Maguey / Mezcal**

- The *mezcaleros* are happy that the mezcal trade enables them to stay in the community, rather than having to migrate, as many able men have to do.

**Palma soyate**

- No assessment of success provided

**Palma camedora**

- Generates money that can provide, in time, for purchasing luxury items such as radios.
- Mimimal processing is required (unlike coffee)
- Reported concept of success domesticating product & bringing closer to home & increasing yield

**Tepejilote palm**

- Income earned, in return for little time, labour, resources.
- Non economic gains also realised as a result of barter for good that are generally not found in the area.

## 2. *Output of workshop discussions held between members of project team*

In each case, definitions are broadly split into economic, social and environmental aspects. The definitions below are sourced from community reports [C], market analysis [J], household survey [D] or the discussion between team members [T].

### 1. Household level (hhd)
The hhd level definitions tend to be economic and social.

*1.1 Economic* [incorporates financial, physical and some aspects of human capital]
- That the product generates cash. Can be sold [C]
- Rapid sale possible [C]
- That it provides employment (i.e. the community can add value to it, important in cases like Goma Santa Rosa, where there are not many other activities to occupy them) [C]
- Activity can generate enough money to create opportunities for the next generation (send children to the US) [C]
- Activity contributes to covering basic necessities of the family [C]
- Serves the family's uses and its activities  (i.e. autoconsumption) [C]
- Provides guarantee for credits (e.g. pita) [C]
- That supply is controlled by the producer hhd (and they therefore also control its price). This equates to profitability. [T]
- That women's labour is rewarded (returns to labour) and they have a voice in controlling the income (this cuts across economic and social) [T]
- Level of income for those involved in NTFP [D]
- % of income from NTFP [D]
- Importance of NTFP in household livelihood strategy [D]
- Household's perception of its own success [D]
- Returns to labour (e.g. relative to local wage rate) [D]
- Returns to limiting factors (i.e. usually labour, but sometimes the limiting factor might be a capital constraint) [J]

*1.2 Social* [equivalent to social capital and some aspects of human capital]
- That the activity contributes to making them happy [C]
- That the work involved is agreeable work [C]
- Provides opportunity to build capacity [C]
- Provides recognition in the press and other projects (e.g. for jipijapa) [C]
- That the household is successful relative to its peers [D]

**2. Community level**
These definitions can be economic, social and environmental.

*2.1 Economic*
- Proportion of people who are involved and benefit within the community (e.g. more than 50% may be considered good) [T]
- That a large percentage of final price stays in the community [T] [note: ideally it is important also to know how the community spends that money (are 80% of the people involved but they spend the money on products from China, or are 5% involved and they spend all their money in the community, i.e. effective trickle-down effect)] [J]
- That the product does not require processing (e.g. Palma camedora is not labour intensive compared to the high level of work required for their main crop coffee) [C]
- That it provides employment (i.e. the community can add value to it, important in cases like Goma Santa Rosa, where there are not many other activities to occupy them) [C]
- Control by the producer community of the supply (and therefore of the price). This equates to profitability. [T]
- That the product has more than one buyer [C]
- That there are price differentials for different qualities [T]
- That the commercialisation chain is not vulnerable to risk [T]

*2.2 Social*
- Even distribution of profit margins along the chain [J]
- That it doesn't cause internal conflict (e.g. problem of jipijapa) [C]
- That it permits people to continue to stay in the community rather than having to migrate (impact on social services available to community – social and human capital) [C]

*2.3 Environmental* (incorporates natural capital)
- That rate of commercialisation is consistent with biological sustainability [C]
- That it helps to conserve the forest (e.g. hongo forest management plans) [C]

**3. National (or beyond community) level**
Note that the team did not complete the discussion considering social or environmental aspects of national-level measures of success.

*3.1 Economic*
- That the market works well (i.e. do the prices at producer level reflect those at consumer level? Need price signals to give information on quality, e.g. cocoa chain doesn't provide information on the qualities required to the community, whereas in hongos the information about qualities versus prices is getting to the producer). If the market does not work well then this might lead to unequal distribution of profits along the chain (e.g. one trader holds on to all of it) [T]
- That there are price differentials for different qualities
- That the commercialisation chain is not vulnerable to risk [T]
- That the activity increases employment [T]
- That the activity produces government revenue [T]

## 3. Definitions of success from household data (see te Velde., 2005).

Box 2 lists various definitions of successful commercialization based on the household data. There are advantages and disadvantages to each definition. Some definitions can easily be measured (subjective questions), while lack of suitable data impedes proper measuring of other definitions (profit measures). Some are subjective while others are not. Tables A1-A3 provide an overview of how households answered the subjective questions of success.

Box 2   Definitions of successful commercialization

Success at household/trader level can be defined as

→ Level of income for those involved in NTFP
→ Share of income derived from NTFP
→ How important have NTFPs been in your livelihood strategy
→ How successful do regard yourself
→ How successful do you compare yourself against your peer
→ Labour returns ( = total sales / hours to collect  * frequency of such trips )
→ Profit margins at each stage. Total revenues minus total costs at each stage.

Success at the community level could be identified by the average of such variables over all households within a community.

We can also compare the mean income of all households involved in say Brahea Dulcis with that of all households involved in say Palma Camedora. Chart A1 shows that there are indeed substantial differences in mean income (per household) across products. The variability across products is smaller in Bolivia than in Mexico. Mean income for households involved in Palma Camedora is less than a dollar a day, while that for Brahea households more than US$ 8. The bottom two graphs of chart A1 relate to per capita income and hence account for the household size. They also split some product by community.

Chart A2 shows a similar comparison for the mean share of NTFP in total income derived from NTFP activities. The share is codified as
Share  = 1      if NTFP income share is between 0-25%
= 2      if NTFP income share is between 26-50%
= 3      if NTFP income share is between 51-75%
= 4      if NTFP income share is between 76-100%

The mean share varies considerably. It is striking that the mean share is higher in Bolivia than in Mexico. Chart A3 provides a further breakdown by product/community and uses estimated share data.  Table A7 elaborates on results in table A2. It shows that percentages of households deriving selected percentages of their income from NTFP trade. On average, a third of households in Bolivia depend on NTFP trade for more than half of their income, while only a sixth of households in Mexico depend on NTFP trade for more than half of their income. Charts A10-12 clearly show a pattern that poor households depend on NTFP for a large share on their income, while higher incomes

are in general associated with lower NTFP income shares. However, it should be noted that this appears to conceal clusters of product specific household.

Chart A4 shows the mean of answers to questions on how successful households think they are compared to their peers (codified as 1 if less successful, 2 if the same, and 3 if more successful) and how important NTFPs have done in the past in terms of their livelihood strategy (similar codification). The mean for most products is around 2, which should be the case when taking the mean. There can of course be significant variations across households and that is what we are interested in this paper. Finally, Chart A5 provides mean household income by community.

Indeed, while there are substantial differences in various indicators across communities and products, Appendix E discusses preliminary to what extent variation in NTFP derived income is due to the products they trade, due to the communities they live in or due to variability of individual households, or because of some combination of this. The main conclusion from that analysis is that there is great variety in productivity across households, even within products and/or communities. This motivates examining the research questions at an individual level.

Table A1    How much have NTFPs contributed to your livelihood strategy (numbers of households)? NTFP households

| Product (community) | Less than before | Same | Better than before | Total |
|---|---|---|---|---|
| Copal (Pucasucho) | 0 | 6 | 0 | 6 |
| Incienso (Pucasucho) | 0 | 16 | 0 | 16 |
| Palma Camedora (Monte Tinta) | 11 | 13 | 0 | 24 |
| Brahea Dulcis (La Esperanza) | 1 | 14 | 1 | 16 |
| Brahea Dulcis (Tomachi) | 1 | 19 | 0 | 20 |
| Cacao (Carmen del Emero) | 0 | 4 | 18 | 22 |
| Cacao (San Silvestre) | 0 | 8 | 6 | 14 |
| Goma (Santa Rosa de Challana) | 5 | 0 | 0 | 5 |
| Hongos (Cuajimoyolas) | 0 | 1 | 4 | 5 |
| Hongos (Latuvi) | 0 | 3 | 9 | 12 |
| Jipi Japa (Buenavista) | 1 | 1 | 7 | 9 |
| Jipi Japa (Candelaria) | 0 | 2 | 12 | 14 |
| Jipia Japa (El Carmen Surutu) | 3 | 3 | 7 | 13 |
| Jipi Japa (Portrero San Rafael) | 0 | 5 | 1 | 6 |
| Maguey (La Esperanza) | 0 | 3 | 0 | 3 |
| Maguey (Topiltepec) | 0 | 9 | 0 | 9 |
| Palma Tepejilote (Tiltepec) | 2 | 8 | 5 | 15 |
| Palma Tepejilote (Yagavila) | 0 | 4 | 2 | 6 |
| Pita (Agua Piscadito) | 3 | 2 | 1 | 6 |
| Pita (Arroyo Blanco) | 1 | 3 | 18 | 22 |
| Total | 28 | 124 | 91 | 243 |

(outliers include Cacao and Jipi Japa - doing well -; Palma Camedora and Goma - doing less well-.

TableA7 Percentages of households deriving selected percentages of their income from NTFP trade (based on 6.2)

| | <25% | <50% | <75% | >50% (i.e. more than half of total income) |
|---|---|---|---|---|
| Agua pescadito | 100 | 100 | 100 | 0 |
| Arroyo Blanco | 86 | 100 | 100 | 0 |
| Buenavista | 44 | 100 | 100 | 0 |
| Carmen del Emero | 100 | 100 | 100 | 0 |
| Candelaria | 0 | 50 | 71 | 50 |
| Cuajimoyolas | 100 | 100 | 100 | 0 |
| El Carmen Suratu | 27 | 27 | 27 | 83 |
| La Esperanza | 16 | 37 | 63 | 63 |
| Latuvi | 84 | 100 | 100 | 0 |
| Monte Tinta | 83 | 100 | 100 | 0 |
| Potrero San Rafael | 33 | 67 | 100 | 33 |
| Pucasucho | 0 | 35 | 100 | 65 |
| San Silvestre | 100 | 100 | 100 | 0 |
| Santa Rosa de Challana | 45 | 68 | 90 | 32 |
| Tiltepec | 100 | 100 | 100 | 0 |
| Tomachi | 20 | 53 | 100 | 47 |
| Topiltepec | 38 | 66 | 86 | 34 |
| Yagavila | 83 | 100 | 100 | 0 |
| | | | | |
| All communities (Bol) | 43 | 66 | 90 | 34 |
| All communities (Mex) | 70 | 85 | 93 | 15 |

- A third of households in Bolivia depend on NTFP trade for more than half of their income.
- This is only a sixth in Mexico.

**Correlations between measures of success, NTFP households**

Table A2    How successful do you think you are compared to your peer (numbers of households)? NTFP households

| Product (community) | Less successful | Average | More successful | Total |
|---|---|---|---|---|
| Copal (Pucasucho) | 0 | 5 | 1 | 6 |
| Incienso (Pucasucho) | 0 | 15 | 2 | 17 |
| Palma Camedora (Monte Tinta) | 11 | 9 | 4 | 24 |
| Brahea Dulcis (La Esperanza) | 5 | 8 | 1 | 14 |
| Brahea Dulcis (Tomachi) | 13 | 7 | 0 | 20 |
| Cacao (Carmen del Emero) | 4 | 12 | 6 | 22 |
| Cacao (San Silvestre) | 3 | 9 | 2 | 14 |
| Goma (Santa Rosa de Challana) | 0 | 23 | 0 | 23 |
| Goma (Tomachi) | 2 | 13 | 0 | 15 |
| Hongos (Cuajimoyolas) | 7 | 5 | 1 | 13 |
| Hongos (Latuvi) | 6 | 5 | 2 | 13 |
| Jipi Japa (Buenavista) | 6 | 3 | 0 | 9 |
| Jipi Japa (Candelaria) | 8 | 3 | 2 | 13 |
| Jipia Japa (El Carmen Surutu) | 6 | 6 | 1 | 13 |
| Jipi Japa (Portrero San Rafael) | 4 | 0 | 2 | 6 |
| Maguey (La Esperanza) | 3 | 0 | 0 | 3 |
| Maguey (Topiltepec) | 9 | 0 | 0 | 9 |
| Palma Tepejilote (Tiltepec) | 5 | 9 | 1 | 15 |
| Palma Tepejilote (Yagavila) | 2 | 4 | 0 | 6 |
| Pita (Agua Piscadito) | 4 | 2 | 0 | 6 |
| Pita (Arroyo Blanco) | 10 | 12 | 0 | 22 |
| Total | 108 | 150 | 25 | 283 |

**Table A3     How successful do you think you are (numbers of households)?**
**NTFP households**

| Product (community) | Not very[1] | More or less | Very successful | Total |
|---|---|---|---|---|
| Copal (Pucasucho) | 0 | 3 | 3 | 6 |
| Incienso (Pucasucho) | 0 | 11 | 6 | 17 |
| Palma Camedora (Monte Tinta) | 18 | 5 | 1 | 24 |
| Brahea Dulcis (La Esperanza) | 2 | 14 | 0 | 16 |
| Brahea Dulcis (Tomachi) | 4 | 16 | 0 | 20 |
| Cacao (Carmen del Emero) | 3 | 19 | 0 | 22 |
| Cacao (San Silvestre) | 2 | 12 | 0 | 14 |
| Goma (Santa Rosa de Challana) | 0 | 23 | 0 | 23 |
| Goma (Tomachi) | 1 | 14 | 0 | 15 |
| Hongos (Cuajimoyolas) | 8 | 4 | 1 | 13 |
| Hongos (Latuvi) | 4 | 8 | 0 | 12 |
| Jipi Japa (Buenavista) | 5 | 3 | 1 | 9 |
| Jipi Japa (Candelaria) | 5 | 7 | 2 | 14 |
| Jipia Japa (El Carmen Surutu) | 4 | 9 | 0 | 13 |
| Jipi Japa (Portrero San Rafael) | 2 | 2 | 2 | 6 |
| Maguey (La Esperanza) | 1 | 2 | 0 | 3 |
| Maguey (Topiltepec) | 2 | 7 | 0 | 9 |
| Palma Tepejilote (Tiltepec) | 7 | 7 | 1 | 15 |
| Palma Tepejilote (Yagavila) | 4 | 2 | 0 | 6 |
| Pita (Agua Piscadito) | 6 | 0 | 0 | 6 |
| Pita (Arroyo Blanco) | 15 | 7 | 0 | 22 |
| Total | 93 | 175 | 17 | 285 |

[1] Cannot cover basic needs
[2] Can cover basic needs
[3] Can more than cover basic needs

- This is an absolute measure of "success"; household surveys indicate that households involved in Pita and Palma are thinking they are not doing well.
- Involvement in incienso is considered successful .

## 4. Definitions of success defined at project inception workshops

(see Marshall et al., 2003).

| **Definición del éxito**<br>L = Identificado en la literatura, M = identificado en Mexico<br>B = Identificado en Bolivia |
| --- |
| [L] Aumentar el ingreso de dinero para las familias dentro de la comunidad? |
| [L] Mejorar la situación económica de las mujeres? |
| [L] Mejorar la justicia social? |
| [L] Mejorar el bienestar (educación, salud, alimentación, etc.) dentro de las comunidades? |
| [L] Mantener la conservación de los recursos forestales? |
| [M] Mejorar el bienestar de los consumidores? |
| [M] Mejorar la capacitación? |
| [M] Fortalecer la organización comunitaria? |
| [M] Fortalecer el mercado? |
| [B] Cumplir con normas internacionales? |
| [B] Aumentar el ingreso de dinero para empresas? |
| [B] Aumentar el ingreso de dinero para el gobierno? |
| [B] Mejorar el nivel de aceptación del producto por el comprador? |
| [B] Aumentar el valor agregado local del producto? |
| [L]Aumentar la proporción de la población con empleo? |
| [L] Mejorar la situación económica de las personas mas pobres de la comunidad? |
| [L] Mejorar el control y apropiación de los recursos forestales para las comunidades? |
| [M] Fortalecer la cultura local? |
| |

## 5. CIFOR Livelihood descriptors

Source: CIFOR Project 'Assessment of the Potential for Non-Timber Forest Products Based Development'. (see Newton *et al.,* 2005, in press, for details of how this method was used in the design and validation of the CDST).

1. Household

|  | EFFECT OF NTFP COMMERCIALIZATION AND TRADE |
| --- | --- |
| **SCALE OF LIVELIHOOD EFFECT** | **EFFECT ON………..** |
| **Household** | |
| Natural Capital | Access to resources by HH (physical)<br>Access to resources by HH (rights)<br>Equitable access within HH<br>Control over resource/ability to exclude others |
| Physical Capital | Shelter and household possessions<br>Communications (including transport)<br>Ownership/access to production and processing equipment<br>Equitable access within HH |
| Human Capital | Health and nutritional status<br>Endogenous skills ("local" knowledge)<br>Exogenous skills (formal education and "outside" skills)<br>Access to information<br>Empowerment of Women<br>Equitable access within HH |
| Financial Capital | Household income level<br>Income smoothing<br>Household savings<br>Access to credit<br>Equitable access within HH |
| Social Capital | Endogenous social resources (cohesion, confidence, etc.)<br>Exogenous social resources (contacts, baragining power, etc.) |

Political Power

2. Community

**EFFECT OF NTFP COMMERCIALIZATION AND TRADE**

**SCALE OF LIVELIHOOD EFFECT**

**EFFECT ON………..**

**Community**

Natural Capital

Equitable access to resources
Total access to resources by community
Target species resource (stock)
Timing of resource flows (target species)

Physical Capital

Local infrastructure development (roads, clinics, schools, etc.)
Communications
Equitable access among HH

Human Capital

Equitable access to education
Access to exogenous skills and information (market info, other)
Effective community organization
Population change through migration

Financial Capital

Community resources
Equitable access to community resources
Reliable revenues (????)
Access to employment

Social Capital

Socio-cultural cohesion
Leverage with outside agents (power)

3. National

**NATIONAL LEVEL**

Impact (-2, -1, 0, 1, 2)

Export Earnings
Employment Generation (beyond community level)
Tax revenue
Import substitution
Indirect benefits