

INDI CASHEW

Global Enterprise Experience 2011



TEAM 58

Alejandro Rodriguez Martinez, Spain, Second
Andres Mauricio Diaz Penarredonda, Colombia, Second
Bora Pheng, Canada, Second
Daniel Escobar Hoyos, Colombia, Second
Jessica Ch'ng Hui Ting, New Zealand, First
Nicanor F Piñole Álvarez, Spain, Second

Executive Summary

This business report will analyse the feasibility of setting up commercial cashew tree plantations to aid the economic and social development of the Bunong in Mondulkiri, Cambodia. The main product of this venture would be the product of the trees; the raw in-shell cashew nut (RCN). Indicashew will act as a middleman between the Bunong people and potential buyers. The company will introduce tree grafts, provide the training of farmers and build the networking connections for the Bunong's to have a wider market. Our target markets are countries with cashew processing plants that do not have enough raw nuts to process. Our short-term goal is to establish sustainable cashew plantations in Mondulkiri and dependable relationships with local and global processing plants with a long-term plan to become a processor and seller of cashew kernels. This report will only focus on the short term goal. Our forecast shows that we will make a profit by the third year on the pretext that we begin grafting in July 2011.

Overview



The “Bunong” are an indigenous group of people that mostly reside in the Mondulkiri province of Cambodia. They have a population of 30,000 people, which accounts for 42% of the total indigenous people in Cambodia. Traditionally, their livelihoods depended mostly on swidden agriculture with other activities such as fishing, hunting, and collecting forest resources. The community has recently turned to the more time-consuming activity of rice cultivation to improve their livelihoods. However, monocropping leaves them vulnerable as they still experience 4-5

months of rice shortage per year. In addition to food insecurity, the Bunong people face the erosion of cultural identity as they are increasingly absorbed into the mainstream Khmer and foreign culture.

Mondulkiri has excellent soil and weather conditions for cashew cultivation. The cashew tree has already been identified as an important cash crop in Cambodia's export industry with potential for future growth.

Goals

To be able to ensure and measure the success of Indicashew, we plan to achieve several goals:

1. Social goals

- **To increase the food security of the Bunong community.** Measured by the amount of cashew nuts that they can produce and sell as income to buy food. This would supplement their current food production from rice cultivation.
- **To raise the number of Bunongs living above the poverty line.** Measured by a possible farmer's income from cashew nut sales. 37% of households in Mondulkiri are reported to be below the consumption poverty line of 1,819 Riel/day or \$0.46/day in 2004.

- **To preserve the Bunong’s cultural values in practice.** Measured by involvement of the Bunong elders in the decision-making and training process. Traditional leadership, especially in the more remote villages, is still an important cultural element to the Bunong.

2. Environmental goals

- **To maintain soil fertility by organic means.** Measured by quality and amount of RCN produced without artificial fertilizer.

3. Financial goals

- **For Indicashew to become a self-sustainable venture.** This will be measured by our ability to make a continuous profit over 5 years.

Product

The Raw In-shell Cashew Nuts is the main commercial product of the cashew tree. Processing of raw nuts produces cashew kernels and other useful by-products. Cashew kernels are of high nutritional value and contain 5 grams of protein per ounce and high levels of the essential minerals iron, magnesium, phosphorus, zinc, copper and manganese which are used in holistic health solutions and healthy diets. Processing the raw nuts also produces useful by-products such as cashew nut shell liquid (CNSL), the nut’s skin and the cashew apple.



Cashew trees are more resistant to drought than most food crops, as they are not water-intensive and are harvested during the dry season. This makes it ideal as a supplementary crop as it does not coincide with peak labour demands for Cambodia’s major food crop, rice. Additionally, with proper storage, RCN can last very long before processing.

Currently, Bunong villages already plant cashew trees along the main road to protect fallow land. However, because most farmers let cashew trees grow with low effort, cashew yields are low. Cashew yields and their selling price can be improved significantly if farmers apply organic fertilizer, manage trees correctly and improve harvest and post-harvest practices.

It is our intention to only purchase and provide tree grafts for Bunong growers and purchase the harvested raw nuts from them. We choose grafts because they yield crops within 18 months, compared to seedling cashew trees, which will take 2-3 years to yield.

Market Analysis of Cashew nuts

Cambodia currently produces about 60,000 tonnes of in-shell cashews a year or 3 percent of the world’s supply, making it the 10th largest producer. The average quality of Cambodian cashews in the 2009 and 2010 seasons are ranked fifth out of the world’s top eleven producers.

1. Cashew Market Demand

Despite the economic downturn in 2008-2009, cashew nuts seem to be recession-proof. The global consumption of cashew kernels over the last decade has been growing at approximately 7% per year. The table below shows a projection of the demand for in-shell cashews and their kernels

in 2013. India and Vietnam dominate the market share for cashew nut shelling at 58% and 24% respectively. This shows a strong potential for the Bunong community to undertake cashew farming and to sell in-shell nuts.

Table 1: Cashew supply/demand matrix, 2013 projection

| 2013 est. Producers | In-shell (tonnes) | | Kernels (cartons) | | |
|------------------------|-------------------|---------------|-------------------|----------------------|-------------------|
| | Production | Export/Import | Production | Domestic & Carryover | Export |
| India | 600,000 | 695,000 | 12,560,000 | 8,000,000 | 4,560,000 |
| Vietnam | 400,000 | 200,000 | 6,000,000 | 100,000 | 5,900,000 |
| Brazil | 300,000 | 0 | 2,700,000 | 500,000 | 2,200,000 |
| West Africa | 750,000 | -720,000 | 300,000 | 0 | 300,000 |
| Indonesia | 90,000 | -80,000 | 100,000 | 50,000 | 50,000 |
| East Africa | 165,000 | -95,000 | 700,000 | 0 | 700,000 |
| Total | 2,155,000 | | 22,360,000 | 8,650,000 | 13,710,000 |

Sources: Ingredient Sourcing Solutions, Trade

2. Target market

- **Mekong Rain Natural Foods Co. Ltd:** Although there is no cashew processing plant in Cambodia at this point, Mekong Rain Natural Foods Co. Ltd. is planning to open its first plant in Cambodia, thus should be the main potential buyer of Bunong’s RCN.
- **Vietnam Cashew Association (Vinacas):** Vinacas is an association that imports raw cashew nuts and exports cashew kernels. Vinacas revealed that Vietnam needs to import 450,000 tons of raw cashew to offset the demand in 2011. Thus, this association would be a potential buyers of RCN from Indicashew due to its geographically close proximity and high demand of RCN.
- **Indian processors:** India has the highest consumption of cashew nuts in the world, and is one of the world’s top processors of raw cashew nuts. SWATHY Enterprise is an Indian RCN importer, who already buys from Cambodian farmers. Enforcing this tie would help Indicashew increase sales to the Indian market.

3. Competitors:

- **Domestic competitors:** There are many domestic farmers that have successfully sold RCN to Indian and Vietnamese buyers. They predominantly farm in Kampong Cham, Kampong Thom and Ratanakkiri provinces.
- **Global competitors:** Our main competitors would be countries with limited to no processing plants. These include Indonesia, Guinea Bissau, Tanzania and Ivory Coast. Most of the RCN from those countries would be exported to India and Vietnam for processing. We also have to compete with the local producers in Vietnam and India.

4. Competitive advantage:

- **Direct transaction and low prices:** The primary difference with the Indicashew company is that it will shorten the long supply chain between growers and traders to get better returns for growers. Indicashew will also able to sell RCN at a lower price due to there being fewer middlemen to go through for the buyer.

- **Location:** Cambodia is close to Vietnam and India, which are two of the world's largest processors and consumers of cashew nuts. Thus the transporting RCN to either country would be relatively cheap and have fewer risks of damage.
- **Kernel size:** Cambodia's cashews are relatively larger in size than that of Vietnam's with a kernel outturn of 24-28%. This makes them more valuable.
- **Organic:** Agricultural farms in Cambodia are mostly organic by default due to growers' lack of knowledge and inability to afford the high cost of synthetic fertilisers. Indicashew will take advantage of this by gaining organic certification for our farmers as well as introducing affordable organic composting methods.
- **Ease of shelling:** Cashew nuts require careful shelling to prevent their kernels from becoming broken and devalued. Cambodia's cashew nuts are relatively easy to shell, meaning less damaged products for processors, hence are more appealing.

Business strategy

1. Marketing and sales

First, we will liaise with local authorities and Cambodian government to get a list of potential buyers not just in Cambodia but also overseas. Once this is gotten, a thorough analysis is to be carried out in terms of benefits and costs of exporting the raw material to different processing plants. This is why primarily local and nearby processing plants are to be taken into account.

Second, we will create a corporate website that is to aid in creating a healthy image of the company and in giving further details and information to potential buyers. Furthermore the website will highlight the benefits brought about to the local communities.

In the same vein, it is a corporate goal to establish good working relations with NGO's located in the area. These may well provide local people with different expertise and training. Besides being in partnership with different NGO's is a good opportunity to further networking links with commercial entities in different countries. If the company presents itself as a champion of fair trade and local development, then it is highly possible that NGO's agree to help. Existing NGOs with a strong presence in Cambodia are UNESCO, UNDP, ILO and FAO.

Lastly, having already created a good reputation among different entities, then contacts with potential buyers should be established. In succeeding to do so, some of the above "competitive advantage" points are to be used.

2. Training

We shall establish partnerships with existing organizations that have been successful in helping Cambodian farmers. One organization is Srer Khmer which has successfully trained Cambodian farmers in many agricultural ventures.

- **Curriculum:** The training curriculum will be modelled after Srer Khmer. Two primary focuses in our training programme are: introduction of improved planting material and proper plant protection measures. Indicashew's training programme will include the best grafting procedures, when to harvest, how to look for mature cashew nuts, storage practices, organic fertilization and composting techniques. Training will be conducted in both Khmer and Bunong languages to help accelerate the learning process.

- **Trainees:** In keeping with our social goals, the selection of trainees will be decided with the help of village elders from Bunong communities. The basic requirements for selection are for the indigenous people to be aged 18 and above, have a family and possess a household income below \$13.80 a month.

Challenges

Our business faces two potential challenges, they are:

- Market price volatility
- Bunong people resistant to idea of cashew farming

We plan to manage market price volatility by having secured good partnerships with reliable processors as mentioned in our marketing strategy. We will overcome the Bunong people's reluctance by working together with local NGOs already trusted by them, such as Refugee International and communicating with their elders to convey the benefit of our programme.

Financial Analysis

1. Indicashew Company

The following financial analysis is based on the assumption that Indicashew begins operations and training in May 2011, grafting trees in July 2011 and harvesting RCN in 2013 after the 18 month maturing period.

Expenses

During the first 18 months of our project, Indicashew will require an initial investment of \$27,000. This will be acquired through a bank loan of \$30,000. The interest rate charged on loans in ACLEDA Bank, one of Cambodia's top banks, is 1.5% per month. We will hold onto this loan until 2017 before paying out the principle.

We will loan equipment and grafted cashew trees to the Bunong and the payment for these will be recovered in 2013 when the sale of RCN generates income. Payment received in 2013 would be \$2,000 and \$2,500 for equipment and grafted cashew trees respectively. In the subsequent year (2014), it is expected that the number of indigenous people joining our programme will increase by 20%. Thus the company will incur an upfront expense of \$400, \$500, and \$1,200 for equipments, cashew tree, and training respectively. This trend is expected to repeat itself until 2017.

In order to operate, Indicashew will need a warehouse/facility to conduct trainings and store harvested nuts. The estimated cost of a warehouse rental in Sen Monorom, Mondulhiri is \$300/month.

The estimated cost for transportation of RCN to a processor, in this case, the local processor in Phnom Penh is \$20 per trip. Due to the unavailability of such statistics in Cambodia, this estimate cost was derived from the transportation cost of cashew nuts in Vietnam.

Indicashew will also continue to conduct training courses to improve harvesting procedures and proper plant protection measures. Indicashew will have 1 trainer/supervisor for every 10 farmers to help monitor and ensure that the plantation process is done correctly. The total training programme will cost Indicashew \$50 per trainer/supervisor.

Revenue

The spread for global RCN prices in 2010 was \$950-1,150/tons or \$0.95-1.15/Kg. To remain competitive in the cashew market, Indicashew will buy and sell RCN at a price lower than the current market price by 10%. Thus Indicashew will buy RCN from Bunong farmers at the price of \$0.855/Kg and sell it to domestic or international processors for \$1.035/Kg. The profit margin of 21% will allow Indicashew to achieve its financial goal of becoming sustainable.

In 2010, global RCN prices rose by 50-60% but it is not practical to assume that this growth will remain the same until 2017. We use a more conservative estimate of a constant growth rate in price of 25% over the course of seven years.

Table 2: Indicashew company income

| Indicashew Company Income | Zero Yield | | 6Kg/Tree | 7.5Kg/Tree | 8.63Kg/Tree | | |
|-------------------------------|----------------------|----------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | Year 2011 | Year 2012 | Year 2013 | Year 2014 | Year 2015 | Year 2016 | Year 2017 |
| Revenue | | | | | | | |
| Sales of ISN | \$0.00 | \$0.00 | \$77,625.00 | \$145,546.88 | \$251,213.91 | \$376,820.86 | \$565,231.29 |
| Repayment for Equipment | \$0.00 | \$0.00 | \$2,000.00 | \$400.00 | \$400.00 | \$400.00 | \$400.00 |
| Repayment for Grafted | \$0.00 | \$0.00 | \$2,500.00 | \$500.00 | \$500.00 | \$500.00 | \$500.00 |
| Cost of ISN bought from | \$0.00 | \$0.00 | (\$64,125.00) | (\$100,195.31) | (\$144,114.26) | (\$180,142.82) | (\$225,178.53) |
| Total revenues | \$0.00 | \$0.00 | \$18,000.00 | \$46,251.56 | \$107,999.65 | \$197,578.04 | \$340,952.76 |
| Expenses | | | | | | | |
| Warehouse/Training facilities | \$1,800.00 | \$3,600.00 | \$3,600.00 | \$3,600.00 | \$3,600.00 | \$3,600.00 | \$3,600.00 |
| Prepaid for equipment | \$2,000.00 | \$0.00 | \$400.00 | \$400.00 | \$400.00 | \$400.00 | \$400.00 |
| Prepaid for grafted cashew | \$2,500.00 | \$0.00 | \$500.00 | \$500.00 | \$500.00 | \$500.00 | \$500.00 |
| Training | \$3,000.00 | \$6,000.00 | \$1,200.00 | \$1,200.00 | \$1,200.00 | \$1,200.00 | \$1,200.00 |
| Transportation | \$0.00 | \$0.00 | \$1,200.00 | \$1,440.00 | \$2,160.00 | \$3,732.48 | \$7,739.67 |
| Interest expenses | \$2,700.00 | \$5,400.00 | \$5,400.00 | \$5,400.00 | \$5,400.00 | \$5,400.00 | \$5,400.00 |
| Total Expenses | \$12,000.00 | \$15,000.00 | \$12,300.00 | \$12,540.00 | \$13,260.00 | \$14,832.48 | \$18,839.67 |
| Net Profit/Loss | (\$12,000.00) | (\$15,000.00) | \$5,700.00 | \$33,711.56 | \$94,739.65 | \$182,745.56 | \$322,113.09 |

2. Bunong Farmer

As mentioned earlier, Bunong farmers have no upfront costs because Indicashew will lease them the equipment and cashew plants during the first 18 months. Each Bunong farmer is given 100 grafted cashew trees, equipment and practical training to become cashew growers. When the first harvesting season arrives in 2013, Indicashew will buy in-shell cashew nuts from Bunong farmer at a market price. After deducting the amount owed to Indicashew, each farmer earns an income of approximately \$596.25 in 2013 or \$1.63/day. This is relatively high compared to Mondulkiri's consumption poverty line which is 1,819 Riel/day or \$0.46/day (1USD=3,979Riel). Thus Indicashew's social goals of improving the Bunong's food security and reducing poverty will be achieved.

Table 3: Bunong farmer income

| Bunong Farmer Income | Zero Yield | | 6Kg/Tree | 7.5Kg/Tree | 8.63Kg/Tree | | |
|---------------------------|---------------|---------------|-----------------|-------------------|-------------------|-------------------|-------------------|
| | Year 2011 | Year 2012 | Year 2013 | Year 2014 | Year 2015 | Year 2016 | Year 2017 |
| Revenue | \$0.00 | \$0.00 | \$641.25 | \$1,001.95 | \$1,441.14 | \$1,801.43 | \$2,251.79 |
| Cost | | | | | | | |
| Equipment | \$0.00 | \$0.00 | (\$20.00) | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Grafted cashew tree (100) | \$0.00 | \$0.00 | (\$25.00) | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Total Income | \$0.00 | \$0.00 | \$596.25 | \$1,001.95 | \$1,441.14 | \$1,801.43 | \$2,251.79 |

3. Conclusions

Based on this financial analysis, we believe that our business model is self-sustainable and thus can be replicated to help other indigenous communities in Cambodia as well as around the world.

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