**Proposal to Initiate an EcoLeña Producer Training in the Alcaldea Catarina.**

**Background Rationale**

In general, the biomass briquettes as produced as a forecasted replacement for existing fuelwood and charcoal can compete:

• where wood fuel  is bought  and/or,

• more than four hours a week is spent gathering fuel and/or,

• wood fuel is used as a main cooking source and/or,

• the policy against tree cutting exists and  is enforced  and/or,

• there exist significant fuel security issues (viz., safety/ risk in collecting cutting handling and storing the wood fuel -even if it were abundantly available).

From what we have been able to gather from our initial needs survey, we are confident that the briquette can compete at least economically, where wood is purchased.

• Based on our own 17 year history with training and embedding local briquette production capacity in, now,  about 67 nations, the average cost to the family for fuel briquettes falls between 10 and 20 percent of one average production worker's daily wage. "Production worker" being defined as unskilled or  semiskilled worker as part of a small/micro community-based enterprise,  using manual equipment which is made on or near to the production site as practical.  The production worker is part-owner manager of the micro-enterprise. The equipment is generally made by local artisans (traditionally men). The production workers and the trained trainers who emerge out of the better producers,  are almost entirely comprised of women.

• A well trained and experienced- production team, working with such equipment, in response to a defined local market or seriously motivated by several of the other above factors, will reach their immediate local market of between 30 to 50 families.

• If the published data is correct, about 50% of the population in Nicaragua is earning less than $6.00 USD a day. We will assume that the wages will be a good bit higher for the briquette production worker entrepreneur in these calculations: 200 -  250 $C  (8 - 10 USD a day.)

• The average global briquette consumption rate (assuming the 4" dia x 3" tall briquettes @140 gram (+/- 25 grams) is 2.5 per person per day (+/-0.5).

• Cost to produce the briquettes per family will fall between between $C17 and $C20 a day per family: assume direct local sale to market (+30%) and sales price per family per day==$C22 and 26 per family per day).  This will assume an active daily production, not a casual approach to production.

• We have learned that the cost of firewood per family per day is running at between $C20 and 30 in Granada probably closer to $C20 a day in around Laguna de Apoyo.  These prices are likely to increase with increasing scarcity of the wood (and/or increase in population), greater regulation.  (It is assumed that while the cost of labor for wood supply would be felt in parallel with the cost of producing the briquette, the latter is less likely to suffer a shortage of resources or require restrictions in ago residue use, similar to those imposed on wood cutting).

**Project planning**

Our approach to training may be different to conventional assistance approaches. It is based partially on the nature of the product; Briquettes are  easily replicable and not economically viable to transport over any distance, especially where it can be easily replicated at the delivery point.  We therefore recommend the following approach:

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1.  We work with existing groups, adapting to what they are already doing with what resources they already have available: We add in skills and resources only where we are unable to adapt to their existing situation. The "we" is not just Legacy Foundation but a network of others who are already experienced and who live as close as possible. In this case it will involve the following groups assuming they are interested and available);

• Fundación Progresar: Two or three trainers from the Fundación Progresar in Guatemala; we trained trainers in the technology there in the past two years and are still working with that group periodically.  Three of their staff would be invited to Nicaragua to provide the initial Training of Producers.

• Prolena: They would share their early and current experience with its char briquettes

• Wooden Bridges:  They would provide their direct recent experience in making sawdust/waste paper blends in Granada.

Training Plan

Once the funds are secured and everyone is ready, the following summarized, general sequence of events would take place:

1) Site surveys *(one-two weeks, over 4 to 6 sites)*

The surveys would be conducted amongst  those of us who already have project sites and in projected new sites, to assess best options, capacity, interest, resources, markets for the product,  cooking practices and stove types in use, delineation of the 'wood supply chain'  likely obstacles and alternatives-if any, and other related planning issues.   Legacy Foundation has a feasibility assessment questionnaire used all over the world to help with this process in order to focus the training to local needs, resources and requirements.

2) Fabrication of a variety of equipment felt to best fit the needs resources etc.. (*One - two weeks–overlapping 1) above).*

We would be training the equipment makers and coordinating the supply of same with those who already have their own equipment. The goal is to provide options for the trainees to engage them in determining which works best and what modifications they might find necessary.  For example, we would like to ask Prolena and Wooden Bridges to provide their own models for presses and material processing for demonstration at the training event. We will also want to investigate and provide probably two different presses and one other material processing technology where the site survey suggests the need for them.

*While the criteria for assessing, selecting, processing,  and compacting and drying the residues are very similar,  there is no one mechanical solution for processing or compacting or drying. It varies highly according the resources being used, the level of production intended and of course the capacity for its operation and maintenance by the local producer groups.*

3) Intensive Training. (one solid 5-day week intensive)

With the equipment fabricated otherwise available, and the groups organized logistically, a five day intensive period follows. The Peace Project would be the proposed site for training. From initial impressions, it has the required space for demonstrations and hands on production work, the classroom and presentation space,  as well as accommodation and meals for the 25 trainees and three trainers who will reside there for the duration of  training.

Training Content:

– Materials Preparation: Rationale for and demonstration of briquettes including samples from Prolena as well as those of Wooden Bridges should be available as well as samples brought by the Guatemalan trainers . Beyond these blends and process used to prepare them, training will cover the more challenging process of using actual agro-residues such as leaves grasses husks and straws fronds needles  etc., which are abundant in that area. Mastery of the "feel" for this process is far more important that any technology for pressing or grinding up materials.

– Introduction of Briquette Making Equipment: demonstration, use and options for adaptation to specific needs in the trainees own sites with hand on trials.

– Briquette Production Practice: Using the trainees own prepared materials, production of briquettes with attention to work organization.

– Drying/storage techniques: Several drying options will be presented and demonstrated followed by discussion of adaptation and best fit for the trainee's own sites.

– Use of Briquettes: Burning and use of possibly already dried briquettes from the trainees) and those which are brought in from Prolena, Wooden Bridges, and others from Guatemala--in existing local stoves.

– Practical competition amongst the various producer groups for best quality, quantity, most efficient work organization etc. (everyone wins something, generally)

– Assessing the viability of the briquette. Assessing existing fuel wood costs or difficulties with fuel wood use. Assessing briquette production cost and concerns with production. Is the briquette viable and if so, how ?;

*Assuming it is (if we have done our collective planning homework ).*

– Promotion and Marketing of the briquette in the trainees’ community. Practical demonstration and selling of the briquette product in the local markets: Selecting the best niche for the market, techniques and resources for awareness and promotion, presentation, packaging and selling of the briquette product.

– A review of the week, addressing reviewing discussion demonstrations etc etc.

then;

– Graduation ceremony with certificates of training completion, and finally,

Lunch or evening braai (using briquettes) and closure.

4) Site follow up visits (two weeks over subsequent two --three months).

Most production will begin at home for personal use and immediate neighbors until the briquette gains traction in daily use amongst the immediate local community. The transfer to actual production for the actual local market may begin thereafter. The follow up visits are designed as both a resource for refresher training and to facilitate this transfer into the local market.  Some however will decide to remain at the production for household, immediate neighbor -consumption level because of sheer convenience, fuel security or cultural inhibition. Others will jump right into the market.  What matters is that the briquette assumes a value that the producer and consumer find both acceptable and, importantly, sustainable.

We will then propose to return in 6 -8 months to assess results and recruit interested trainer candidates from amongst those producers who are more articulate, locally respected, and successful with production and sale of a variety of good quality briquettes. (The training of trainers’ proposal will emerge at a later time however; it is not considered here.)

This is the foundation of the producer training proposal which being generated.  A budget has been prepared for those who have access to funding and/or are interested in finding funds to complete this entire project.