



Carpe Diem Travel Limited



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ECOCLUB.com Ecotourism Awards-2007

Update
on the
Carpe Diem/Epic Arts
“Old2Nu”
Project



Since conceiving this project, Carpe Diem and Epic Arts/Cambodia have undertaken the steps detailed below.

1. Researched the most efficient methods of creating the “wool” from collected bags and undertaken a costing exercise for yarn production.

- Rinse the bags slightly to get rid of obvious dirt so that the bags are visually clean.
- Cut the bags:
 - Cut intact bags in horizontal strips. Place in one bucket. These will be used for making the plarn (plastic bag yarn)
 - The residual parts (handles and the bottom strip, plus torn or small parts of bags) should be placed in a separate bucket. These will be used for making stuffing material (see below in design section).
- Soak the bags in a cleaning mixture, made from:
 - 1 Parts Washing Detergent
 - 7 Parts Tepid Water

This measurement can clean 15/16 plastic bags
- Soak for at least 24 hours
- Remove bags from water, and rinse in clean cold water.
- Pat dry and leave to dry naturally.

Cost of cleaning the plastic bags, excluding labour:

| Equipment | Cost (USD) |
|--|------------|
| Dix Dishwashing Detergent (900 ml) (variable cost) | 0.50 |
| Bucket (fixed cost) | 0.40 |
| Water (n/a) | n/a |
| Scissors (x1) (fixed cost) | 0.15 |
| Total | 1.05 |

Assuming 1 part of detergent = 150 ml and 1 part can clean 16 plastic bags
One bottle of detergent will provide 6 parts of detergent and can clean 96 plastic bags ready for use.

Initial cost of cleaning 96 bags : \$1.05

After setup, cost of cleaning 96 bags: \$0.50

Cost of Producing One Ball of Wool:

Assuming 20-22 plastic bags when joined constitutes a ball of yarn

$$96 / 22 = 4.36$$

$$0.50 / 4.36 = 0.11$$

Therefore cost of producing one ball of yarn after initial setup costs is \$0.11.



2. Discussed and agreed upon the process for collecting bags. Initially the aim is to encourage collection of litter in the countryside and villages around Kampot, where Epic Arts is based. With other recycled products in Cambodia (water bottles and drink cans) it has historically been established that financial compensation to collectors is the greatest motivation. The level of the compensation needs to be sufficient to motivate collection, but lower than the cost of new plastic bags. Research is currently being undertaken to establish this. Once this has been completed, the total cost of a ball of plarn can be calculated, and this will be used as a key factor in calculating the total manufacturing cost of a finished item.

3. Identified one member of the disabled community and two members of the deaf community who are already highly skilled in knitting and crocheting. These will make up the core team. They have already undertaken some practice knitting with the plarn, replicating existing items made of wool, to get used to the feel of it and see what types of design work with the texture.



4. Explored design options. It has been determined from testing that small items are not well suited to the texture of the yarn. Although detailed designs can be made, the resulting product looks very “amateur” and is unlikely to have widespread appeal. Research of the existing market in products made from recycled goods has shown that, while collecting waste materials and making items from them is not difficult, finding buyers for the items is more of a challenge. In addition, many items require a large number of good quality materials in the same colour in order to produce output of marketable quality. As the aim of the project is to encourage ALL plastic bags to be collected from fields and streets, it is not wished that it is necessary to be selective about which of them can be actually accepted.

Therefore a great deal of consideration has been given to the items that will be made, to fulfill these two main objectives:

- A product that is of sufficient quality, style and usefulness to be widely marketable, both in-country and overseas.
- A product that uses good quality, damaged and incomplete bags of all shapes and colours.

After consultation, it has been agreed that the next stage (the detailed design process) will focus on soft furnishings – initially large bean bag seats designed for outdoor terraces. This will be a large ball in design, using a circular tight crochet pattern. Incomplete and damaged plastic bags will be shredded and used for stuffing. This design has a number of appeals:

- In Cambodia, most people have outdoor seating areas. However, regular and heavy rains, especially during the monsoon season, make having comfortable (i.e. cushioned) seating impractical, the only such outdoor cushions in Cambodia being made from cotton filled with kapok which become lumpy and discoloured when wet. Being made of, and filled with, plastic, the balls will be weatherproof.
- The large size means that there is no need to be detailed in design, a simple circular crocheting will suffice, and yet the finished output will look “funky” rather than amateur, increasing its appeal. Similar products (such as footstools) are being made in Cambodia from river weed and are being marketed in upmarket furniture shops.
- For export, the balls could be shipped unfilled and be filled with collected plastic bags by the client as there is no skill required for this.
- The balls can be made with a mixture of different colours.

The next steps have been agreed as follows:

5. The knitters will experiment with making large crochet circles or balls, with a consistent shape and texture, and filled them with shredded bags.
6. Finalise costings for a ball of plarn.
7. A volunteer product designer/manager from New York will be arriving mid-October for a period of 6 weeks. Her brief is:
 - o Finalise designs and manage the production of prototypes/samples.
 - o Complete the costing/pricing process.
 - o Build relationships with retail outlets in Phnom Penh.
 - o Train a local project manager.
 - o Together with Epic Arts and Carpe Diem, produce educational posters and/or t-shirts for distribution in Kampot province villages.
 - o Commence discussions with overseas retailers and research export possibilities.