Business Plan: Paper Recycling Plant

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BUSINESS PLAN PROPOSAL

Paper Recycling Plant

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For:

Business Plan Competition,
Ministry of Youth Affairs, Government of Pakistan

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I. EXECUTIVE SUMMARY:

1. Business Idea And Unique Selling Point

Our Business plan is a process to convert used paper to the new, re-useable paper. The process is known as Paper Recycling. Our business will help the paper industry to fulfil the rapidly increasing demand of paper products. Due to the inability for paper industry to meet the demand of paper, country needs to import paper from abroad. Due to this demand-supply gap, prices of paper products are increasing day by day. Our business plan will not only decrease the import bill of the country but also will decrease the price of paper products which will increase the purchasing power of the individuals and hence it will increase their welfare.

2. Implementation Plan

In the initial stages, we will start with the establishment of small/medium scale firm with support of Government in order to sustain in case of initial losses. We'll try to capture the market by different means of marketing (Electronic, Print, TV etc). When our product captures target proportion of market, we'll then plan for the extension of the firm, either by expanding the plant size in the same area or installation of new plant on new piece of land.

3. Market Opportunity

Despite minor fluctuations in the consumption of paper over the years, it is showing an increasing trend. From the data of 44 Years (given in later paragraphs), we can predict that in future this demand will be increasing, as a result production capacities will be needed to be increased to meet the world demand.

Per-Capita Paper Consumption in Pakistan

Pakistani Paper market is large and growing but the pace of growth is declining because of increase in cost of production due to rapid increase in Fuel and Energy prices. Despite of the constraints, the market will grow because of the increase in demand of paper products forthcoming years.

Per capita paper consumption is showing increasing trend over the years. In the period 2001-02, the consumption took huge jump showing the increase in need of paper in daily life. Pakistan's share in World consumption, although very minute, is increasing over time. From almost 0 percent in 1961, this share increased to 0.02% in 2004.
The information stated above shows that there is huge potential in Paper Market as the per capita consumption is increasing over the years.

Recycling Process

Paper Recycling has five main categories and 67 sub-categories. The details of the processing stages will vary according to whether pulp substitute grades, newsprint or packaging grades are treated. After an initial soaking, the recovered paper is pulped to separate the fibres, screened to remove the non-paper components and paper and board detrimental to production, de-inked (but not in packaging production), thickened and washed. During these refining processes both unusable materials and some fibres are removed from the system; such losses have been estimated at 15% for newsprint reprocessing. Therefore, the input of one tonne of recovered paper will result on average in the production of approximately 850 kg of recycled paper. The yield does depend on the paper and board being produced – in packaging grades yields are high, in newspaper production 15-20%, and in graphic papers some 35%. Losses tend to increase with increased recovered paper content in paper destined for recycling. Unlike metals and glass, paper cannot be perpetually recycled, as the fibres break in the pulping process. It is estimated that paper can be reprocessed four times so virgin fibre will always be needed.[1]

4. Financial Plan

Initial capital requirement for manual processing will be around Rs. 2 Billion.
Initial capital requirement for automatic processing will be around Rs. 3.8 Billion.
Details of revenue and expenditures are given in main sections.

5. Social and Economic Benefits and Environmental Assessment

Some Environmental Benefits

1) Recycling can reduce water use in paper production by nearly 60% and energy consumption by 40%
2) Air pollution can be decreased by 74% and water pollution by 35% (these figures depend on factors such as transport distances and de-inking methods used)
3) Disposal problems are reduced by using waste paper to produce new paper. For every ton of paper used for recycling, the savings are:[2]
   - At least 30000 liters of water
   - 3000-4000 KWh electricity (enough for an average 3-bedroom house for a year.
   - 95% of air pollution
4) Recycling half the world's paper would free 20 million acres of forest land[3].
5) Recycling one stack of newspapers about six feet tall saves the life of one tree 35 feet tall. Recycling approximately one ton saves 17 trees[4]

[1] http://www.assurre.eu/uploads/documents/pub-30_en-f9225e74-12d3-4088-b307-15ffc50dc933.pdf
[2] Ibid
[3] EarthWorks Group. 1990. The Recycler's Handbook. Berkeley, CA: The EarthWorks Press
[4] San Diego County Office of Education 1991. RAYS — Recycle and You Save

Some Social and Economic Benefits

1) Recycling will help local industries grow and will also bring in more employment.
2) There is 28 - 70 percent less energy consumption in producing recycled paper compared to virgin paper. Every ton of recycled paper saves approximately four barrels of oil, 4200 kilowatt hours of energy and enough energy to heat and air-condition the average North American home for almost six months. (South Carolina Electric & Gas Company. 1991. Recycle — Save Energy.) [5]
3) There is also less water usage. This is because most of the energy used in papermaking is required for the pulping needed to turn wood into paper
4) Using recycled paper reduces the need for primary raw materials

II. BUSINESS IDEA AND UNIQUE SELLING POINT

Our Business plan is a process to convert used paper to the new, re-useable paper. The process is known as Paper Recycling. Our business will help the paper industry to fulfil the rapidly increasing demand of paper products. Due to the inability for paper industry to meet the demand of paper, country needs to import paper from abroad. Due to this demand-supply gap, prices of paper products are increasing day by day. Our business plan will not only decrease the import bill of the country but also will decrease the price of paper products which will increase the purchasing power of the individuals and hence it will increase their welfare.

There are two possible reasons for which people would love to buy recycled paper products.

1. In an era of high rate of inflation, this low priced range of products will attract people to purchase.
2. Recycled paper products are friendly to environment. Most of the people don't know about the concept of recycling. If awareness is created amongst the individuals, this will lead to increase in recycled product's demand.

Since this production process requires used paper, less energy, less water and other raw materials, it is a cost effective process. In this way it has advantage over other products in the market. Another aspect of advantage is that of environment friendliness. This product will not only compete with the existing paper maker firms but also it will compete with the other closely related industries, such as polythene bag manufacturers. We all know that polythene bags are in one way or the other hazardous to the environment. This weakness of polythene bags becomes our strength and hence gives us competitive advantage over them.

[5] http://www.bringrecycling.org/benefits.html

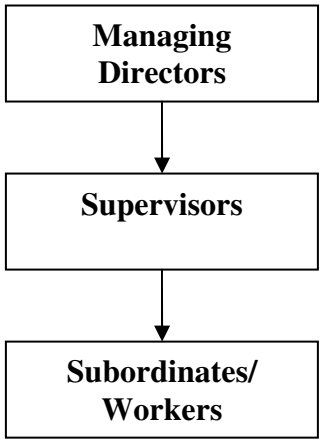
III. IMPLEMENTATION PLAN

In the initial stages, we will start with the establishment of small/medium scale firm with support of Government in order to sustain in case of initial losses. We'll try to capture the market by different means of marketing (Electronic, Print, TV etc). When our product captures target proportion of market, we'll then plan for the extension of the firm, either by expanding the plant size in the same area or installation of new plant on new piece of land.

Currently we are four members of the team, **Muhammad Ali**, Team Leader/ Contact Person (MAS Economics), **Sana Askari** (BS Information Technology), **Muhammad Salman** (BE, NED University) and **Sheba Askari** (MS Computer Science). We will plan the whole setup and experts will be hired according to their respective fields. Two lead economists and one Ex-SIEMENS Electrical Engineer having 30+ years of experience, have agreed to help us in policy making and operational processes.

Organization Structure

Our tentative organization structure is as follows.



In the initial stages we will hire minimum amount of workers required to start the business. Afterwards we will continue the hiring process according to the extension plan.

Return on Investment

We plan to a lot fix percentage of return on investment to our investor. However, if the net profit falls below the return value, we will then go for a different percentage which will be based on net profit.

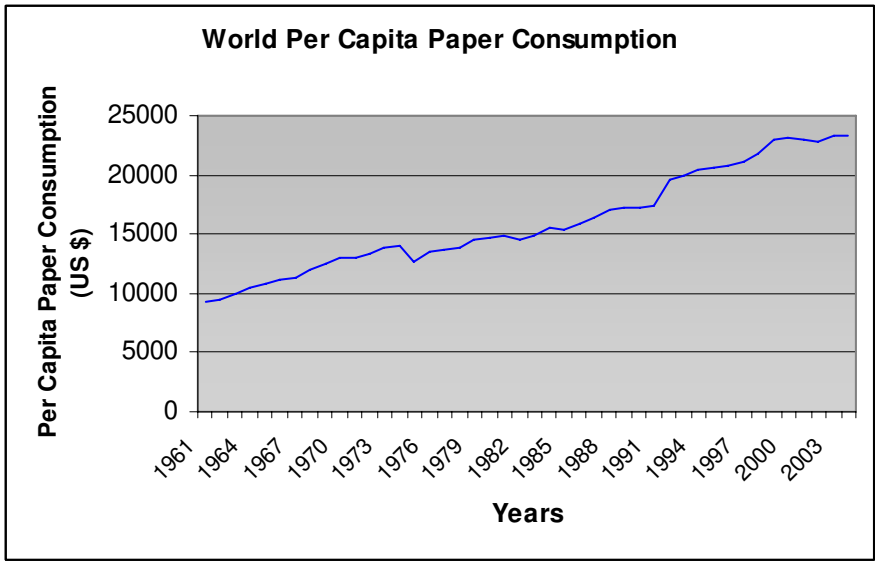
IV. MARKET OPPORTUNITY

In order to analyse market demand for paper products, we first need to analyse the World demand for Paper products by using per capita paper consumption and then analyse Pakistan with the same variable.

Per capita Paper Consumption of the World.

Figure 1 shows the per capita consumption of paper in the world since 1960.

Figure 1



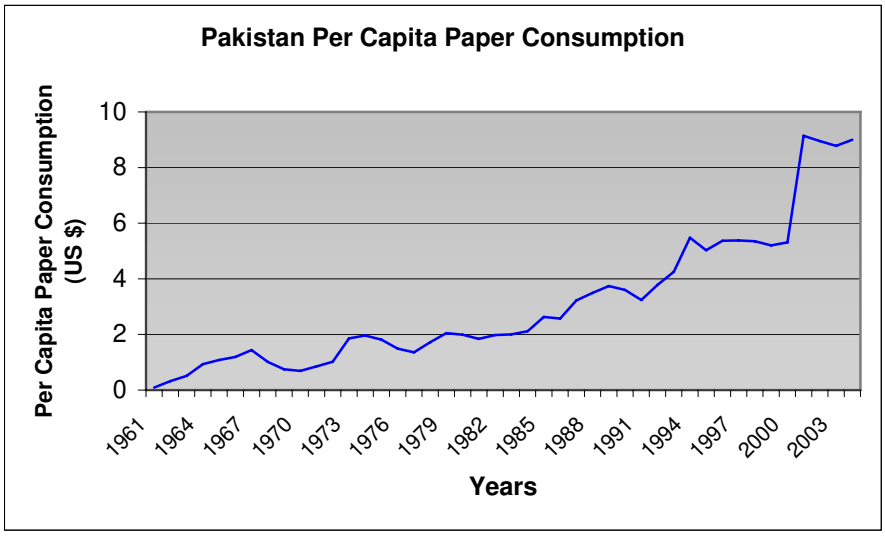
Source: http://www.earthtrends.wri.org/

We can clearly see from the figure that despite minor fluctuations in the consumption of paper over the years, it is showing an increasing trend. From this data of 44 Years, we can predict that in future this demand will be increasing, as a result production capacities will be needed to be increased to meet the world demand.

Per-Capita Paper Consumption in Pakistan

Pakistani Paper market is large and growing but the pace of growth is declining because of increase in cost of production due to rapid increase in Fuel and Energy prices. Despite of the constraints, the market will grow because of the increase in demand of paper products forthcoming years.
Figure 2, shows us the per capita consumption of paper in Pakistan.

Figure 2



Source: http://www.earthtrends.wri.org/

It is quite evident from the figure that per capita paper consumption is showing increasing trend over the years. In the period 2001-02, the consumption took huge jump showing the increase in need of paper in daily life.

Comparison with World Per-Capita Paper Consumption

Table 1

Year	World	Pakistan	Share in World Consumption
1961	9364.94	0.09	0.00%
1965	10885.22	1.08	0.01%
1970	12935.97	0.69	0.01%
1975	12751.44	1.81	0.01%
1980	14694.99	1.99	0.01%
1985	15416.3	2.63	0.02%
1990	17288.43	3.6	0.02%
1995	20688.13	5.03	0.02%
2000	23181.33	5.31	0.02%
2004	23293.55	5.6	0.02%

Source: http://www.earthtrends.wri.org/

Table 1 shows that trend of per capita consumption in both Pakistan and World are increasing over time. Pakistan's share in World consumption, although very minute, is increasing over time. From almost 0 percent in 1961, this share increased to 0.02% in 2004.
The information stated above shows that there is huge potential in Paper Market as the per capita consumption is increasing over the years.

Expected Market Share

In initial stages we are not expecting to capture huge market share because of the limitation of the resources employed. However, we can say that in 5 years time, we can cover upto 10% of the market share and the paper recycling industry can cover 40-45% of market share on aggregate.

Market share can be increased by means of marketing and creating awareness amongst individuals. Low priced and moderate quality recycled goods will be popular in small industries and households.

Target Customers

Considering the use of paper products, our target customers could be an individual, a corporation or government. In addition, existing paper manufacturing companies can also use our recycled pulp for their paper manufacturing, in this way we can also be the raw material provider for the industry.

Paper recycling process

Recovered paper reprocessing varies according to the type of recycled paper product, which will in turn determine the type of recovered paper that is used as the process feedstock. The higher quality, which need little cleaning, are used to make printing and writing papers, tissues and wrapping papers, and are known as pulp substitute grades since the quality is equal to virgin pulps. Newsprint and other papers needing de-inking are reprocessed for further use in the production of newspaper and hygiene papers. The lower qualities are mainly used for the production of packaging papers and board. Recovered paper is graded into numerous categories.[6]

Paper Recycling processes include the following main steps[7]:

a. **Pulping:** Adding water and applying mechanical action to separate fibers from each other.
b. **Screening:** Using screens, with either slots or holes, to remove contaminants that are larger than pulp fibers.
c. **Centrifugal cleaning:** Spinning the pulp slurry in a cleaner causes materials that are more dense than pulp fibers to move outward and be rejected.
d. **Flotation:** Passing air bubbles through the pulp slurry, with a surfactant present, causes ink particles to collect with the foam on the surface. By removing contaminated foam, pulp is made brighter. This step is sometimes called deinking.
e. **Kneading or dispersion:** Mechanical action is applied to fragment contaminant particles.
f. **Washing:** Small particles are removed by passing water through the pulp.
g. **Bleaching:** If white paper is desired, bleaching uses peroxides or hydrosulfites to remove color from the pulp.
h. **Papermaking:** The clean (and/or bleached) fiber is made into a "new" paper product in the same way that virgin paper is made.
i. **Dissolved air flotation:** Process water is cleaned for reuse.
j. **Waste disposal:** The unusable material left over, mainly ink, plastics, filler and short fibers, is called sludge. The sludge is buried in a landfill, burned to create energy at the paper mill or used as a fertilizer by local farmers.

[6] http://www.assurre.eu/uploads/documents/pub-30_en-f9225e74-12d3-4088-b307-15ffc50dc933.pdf
[7] http://en.wikipedia.org/wiki/Paper_recycling

Explanation of the Recycling Process

The first step at the paper recycling process is to sort and separate the paper by grades, or type of paper. Then the paper moves by conveyor to the pulper, which contains water and chemicals to separate fibers from each other so that the pulper can chop the paper into tiny pieces. As the heated mixture breaks down the paper fibers, the old paper turns into a mushy texture called pulp. The pulp is sent through a screening process to filter any contaminants that are larger than pulp fibers, such as bits of plastic, staples, glue and twine. Then the pulp is cleaned again by spinning it in a large cone-shaped cylinder.

Next, the pulp is compressed to make the recycled fibers swell, which then makes them ideal for papermaking. After being compressed, color stripping chemicals remove the dyes from the paper. If white paper is desired then the next process is bleaching by using peroxides and hydrosulfites to remove color from the pulp making it whiter and brighter.

At last, the pulp is ready for papermaking which starts by fusing the pulp with water and chemicals together so that it is 99.5 percent water. This blend of watery pulp enters at the beginning of the paper machine and is sprayed by a wide jet continuously. The soaking pulp then heads towards a large flat wire screen where water starts to drain from the pulp, and the recycled fibers quickly begin to attach together to create a watery sheet. Lastly, felt-covered press rollers squeeze out more water. Now the sheet resembles paper, and heated metal rollers dry the paper.

After being wound up, the finished recycled paper is removed from the machine and is cut and shipped to the converting plant where it will be printed or made into new paper products such as paper bags, envelopes, or boxes[8]

Management of Residues

The rejects, effluents and sludges generated by the recycling process include inks adhesive particles, small plastic particles and wax, paper filler and coating particles and large solid materials such as grit, wire (paper clips and staples) and ceramics. Treatment and disposal of these wastes tend to be more complicated and costly than treatment and disposal of effluents and sludges from virgin pulp mills, due to the increased variability and contamination of the raw recovered paper feedstock. This has started to hamper an otherwise positive trend in paper recycling, due to the fact that the more you recycle, the more residues you produce. This is because of the increased recovered fibre content in paper and board destined for recycling. In areas where recycling has already been common practice for some time (Central and Southern Europe for example), mills need more recovered paper to produce the same amount of paper than a mill in Scandinavia. This is because of a higher recovered fibre content in papers. [9]

Collection of paper in the municipal waste streams

Source-separated paper collection schemes are increasingly popular. Paper collected from the household waste stream is extracted either by kerbside collection or by drop-off points. The quality of recovered paper is critical to successful recycling, which is why paper needs to be

[8] http://planetgreen.discovery.com/tv/wasted/wasted-106a.html
[9] http://www.assurre.eu/uploads/documents/pub-30_en-f9225e74-12d3-4088-b307-15ffc50dc933.pdf

separated from other recyclable materials. Paper can also be collected according to the type of paper product different, i.e. cardboard, newspaper or office paper. [10]

Competitors

Our competitors will be the paper manufacturers, bag producers (paper, polythene etc), paper raw material related industries etc. Our business is not restricted to paper making or raw material generation, we want to be more diversified in order to be in sustainable position. In this way, majority of the industries that directly related with paper manufacturing will be our competitors.

Reaching the Customers

Customers are not waiting for our product to be launched instead we are providing them a substitute to a more expensive product. In order to be successful, we need to introduce ourselves to the market. For this purpose, we will market our product(s) through different mediums (Websites, Emails, Print Media, TV etc). Different types of awareness programs will be used to make people buy recycled paper products. We are aware that this sort of awareness programs costs a lot but this way is the most effective way in case of our product.

Reaction of Other Firms

Other firms can react to establishment of our firm because of the nature of competition. They may drop their prices to reduce our competitive advantage or they may use other techniques in order to force us to quit. They may use negative marketing techniques to create negative impression about our products. We are working on the possible reactions and our response to them.

[10] Ibid pp. 10 (9)

SWOT Analysis

Strengths	Weaknesses
1. Low price 2. Environment Friendly 3. Low resource consumption 4. Less garbage in the society	1. Unavailability of Machinery 2. Lack of Human expertise in recycling in Pakistan 3. People may not accept this product if we do not rightly market it. 4. lack of markets for collected materials 5. lack of funding for recycling 6. poor participation by residents in materials collection
Opportunities	**Threats**
1. Employment Opportunities 2. Demand Supply Gap, creates a room for our business 3. Purchasing power of the people will be increased so they will favour our products.	1. Firms may react on this establishment and may negatively affect our profitability and sustainability.

V. FINANCIAL PLAN

Initial Capital Requirements

Our capital requirements vary because of the nature of processes.

1. Manual processing (Slow, Cheap)
2. Automatic processing (Fast, Expensive)

If we pursue with manual processing, this will require Rs. 2 Billion initially. This amount includes the advance rent of land/building, salaries of staff, purchase of basic machinery (manual type/used), purchase of chemicals, purchase of administrative equipments (stationary furniture etc), water container etc.
If we pursue the automatic process of recycling, we need around Rs. 3.8 Billion to start our business. The difference in cost is because of the cost of plant with automatic processes. Plant name is AP Paper Recycling Plant[11].
(These costs are estimates. They may vary at the time of implementation)

Revenue Generation

Our product will be in two different broad categories.

1. Raw Material (Pulp) Generation.
2. Final Paper product manufacturing.

We will be selling recycled pulp to the paper manufacturers; this will be the first source of revenue for us. If we can successfully convince them to purchase our pulp, then this source of revenue can get big.

Secondly, we will also be engaged in production of paper products like paper bags, tissue papers, gift papers, note books etc, this will also be the source of revenue for us.

	YEAR 1	YEAR 2	YEAR 3
Sales	4500000	5500000	6500000
Add: Other Income	50000	120000	180000
Less: Cost of Goods Sold	2806299	3466242	4120017
Gross Profit	**1743701**	**2153758**	**2559983**
Less: Operating Costs	668850	826140	981960
Net Profit (Before Tax)	**1074851**	**1327618**	**1578023**
Less Tax	48207.25	59543.9	70774.6
Net Profit (After Tax)	**1026644**	**1268074**	**1507248**

(Note: All those costs and revenues are rough estimates. Actuals may vary)

[11] http://www.leightoncontractors.com.au/our-capabilities/industrial/projects/ap-paper-recycling-plant.pdf

VI. SOCIAL AND ECONOMIC BENEFITS AND ENVIRONMENTAL ASSESSMENT

Industrialized paper making has an effect on the environment both upstream (where raw materials are acquired and processed) and downstream (waste-disposal impacts).[12] Recycling paper reduces this impact.

Today, 90% of paper pulp is made of wood. Paper production accounts for about 35% of felled trees,[13] and represents 1.2% of the world's total economic output.[14] Recycling of newsprint saves about 1 tonne of wood while recycling 1 tonne (1.1 ton) of printing or copier paper saves slightly more than 2 tonnes of wood. This is because kraft pulping requires twice as much wood since it removes lignin to produce higher quality fibers than mechanical pulping processes. Relating tonnes of paper recycled to the number of trees not cut is meaningless, since tree size varies tremendously and is the major factor in how much paper can be made from how many trees.[15] Trees raised specifically for pulp production account for 16% of world pulp production, old growth forests 9% and second- and third- and more generation forests account for the balance.[16] Most pulp mill operators practice reforestation to ensure a continuing supply of trees. The Forest Stewardship Council (FSC) certifies paper made from trees harvested according to guidelines meant to ensure good forestry practices.[17] It has been estimated that recycling half the world's paper would avoid the harvesting of 20 million acres (80,000 km²) of forestland.[18]

Energy

Energy consumption is reduced by recycling, although there is some debate concerning the actual energy savings realized. The EIA claims a 40% reduction in energy when paper is recycled versus paper made with unrecycled pulp.[19] Some calculations show that recycling one ton of newspaper saves about 4,000 KWh of electricity. This is enough electricity to power a 3-bedroom European house for an entire year.[20] Recycling paper to make pulp may actually consume more fossil fuels than making new pulp via the kraft process, however, since these mills generate all of their energy from burning waste wood (bark, roots) and byproduct lignin.[21] Pulp mills producing new mechanical pulp use large amounts of energy; a very rough estimate

[12] Hershkowitz, A. (2002). *Bronx ecology.* Washington DC: Island Press. p. 62.
[13] Martin, Sam (2004). "Paper Chase". Ecology Communications, Inc.. Retrieved on 2007-09-21
[14] Trends and Current Status of the Contribution of the Forestry Sector to National Economies". Food and Agriculture Organization of the United Nations (FAO) (2004). Retrieved on 2007-09-21.
[15] Marcot, Bruce G. (1992). "How Many Recycled Newspapers Does It Take to Save A Tree?". The Ecology Plexus. Retrieved on 2007-09-22.
[16] Trends and Current Status of the Contribution of the Forestry Sector to National Economies". Food and Agriculture Organization of the United Nations (FAO) (2004). Retrieved on 2007-09-21.
[17] "[http://www.fsccanada.org/certification.htm Certification Tracking products from the forest to the shelf!]". Retrieved on 2007-09-21.
[18] EarthWorks Group. 1990. "The Recycler's Handbook". Berkeley, CA: The EarthWorks Press
[19] "Recycling Paper & Glass SavingEnergy Recycling Paper & Glass". Energy Information Administration (September, 2006). Retrieved on 2007-10-20
[20] "Recycle-Save Energy". South Carolina Electric & Gas Company. (1991). Retrieved on 2007-10-20.
[21] Jeffries, Tom (March 27, 1997). "Kraft pulping: Energy consumption and production". University of Wisconsin Biotech Center. Retrieved on 2007-10-21.

of the electrical energy needed is 10,000 megajoules (MJ) per tonne of pulp (2500 kW·h per short ton),[22] usually from hydroelectric generating plants.

Landfill use

About 35% of municipal solid waste (before recycling) by weight is paper and paper products.[23] Recycling 1 tonne of newspaper eliminates 3 cubic meters of landfill.[24] Incineration of waste paper is usually preferable to landfilling since useful energy is generated. Organic materials, including paper, decompose in landfills, albeit sometimes slowly, releasing methane, a potent greenhouse gas. Many larger landfills now collect this methane for use as a biogas fuel.

Water and air pollution

The US EPA has found that recycling causes 35% less water pollution and 74% less air pollution.[25] Pulp mills can be sources of both air and water pollution, especially if they are producing bleached pulp. Modern mills produce considerably less pollution than those of a few decades ago. Recycling paper decreases the demand for virgin pulp and thus reduces the overall amount of air and water pollution associated with paper manufacture. Recycled pulp can be bleached with the same chemicals used to bleach virgin pulp, but hydrogen peroxide and sodium hydrosulfite are the most common bleaching agents. Recycled pulp, or paper made from it, is known as PCF (process chlorine free) if no chlorine-containing compounds were used in the recycling process.[26]

Additional Environmental Benefits[27]

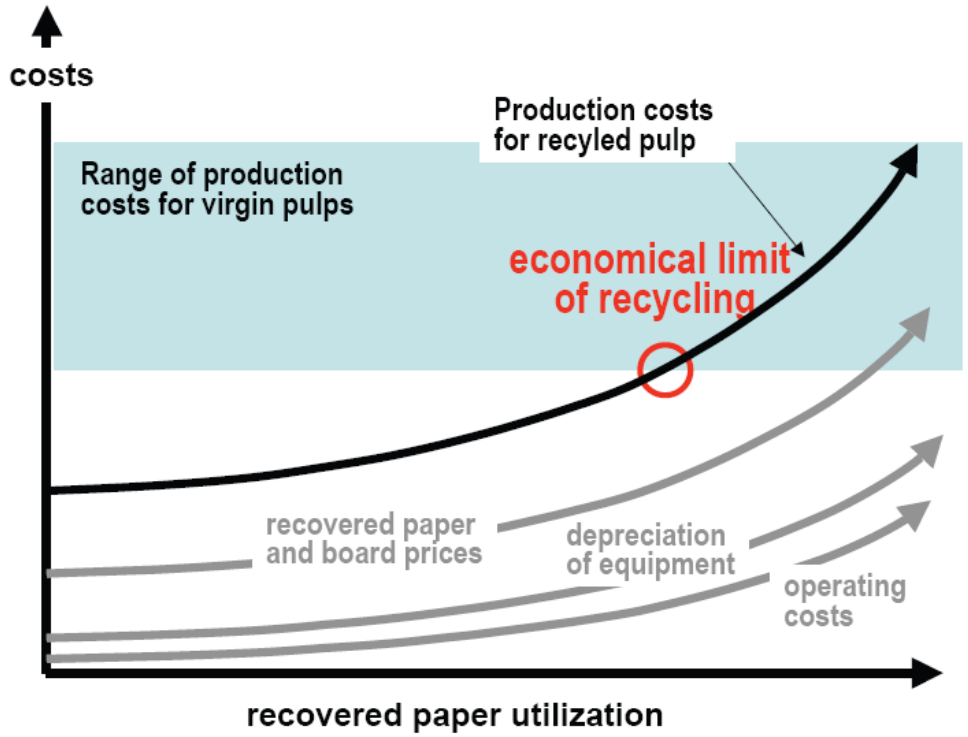
1) Disposal problems are reduced by using waste paper to produce new paper. For every ton of paper used for recycling, the savings are:[28]
   - At least 30000 liters of water
   - 3000-4000 KWh electricity (enough for an average 3-bedroom house for a year.
   - 95% of air pollution
2) Recycling one stack of newspapers about six feet tall saves the life of one tree 35 feet tall. Recycling approximately one ton saves 17 trees[29]

Other Social and Economic Benefits[30]

1) Recycling will help local industries grow and will also bring in more employment.
2) There is also less water usage. This is because most of the energy used in papermaking is required for the pulping needed to turn wood into paper
3) Using recycled paper reduces the need for primary raw materials

[22] Biermann, Christopher J. (1993). *Essentials of Pulping and Papermaking*. San Diego: Academic Press, Inc.. ISBN 0-12-097360-X.
[23] "Executive Summary: Municipal Solid Waste in the United States: 2005 Facts and Figures". US Environmental Protection Agency (2005). Retrieved on 2007-10-23.
[24] Sudbury, Jodi B. (1989). *50 Simple things you Can do to Save the Earth. Berkeley CA: Earthworks*
[25] Recycle on the Go: Basic Information" (October 18, 2007). Retrieved on 2007-10-30.
[26] MacFadden, Todd; Michael P. Vogel (June, 1996). "Facts About Paper". Printers' National Environmental Assistance Center, Montana State University. Retrieved on 2007-10-30.
[27] http://www.assurre.eu/uploads/documents/pub-30_en-f9225e74-12d3-4088-b307-15ffc50dc933.pdf
[28] Ibid
[29] San Diego County Office of Education 1991. RAYS — Recycle and You Save
[30] http://www.copperwiki.org/index.php/Paper_recycling

Figure 3



Source: E-48. The Limits of Paper Recycling. Web: www.cost-e48.net

Figure 3 shows the economic limit of recycling. In the initial stages, cost of recycled paper is well below paper from virgin pulp. These costs are rising as the utilization of recycled paper is increasing. The cost rises to the extent that it matches the cost of producing paper from virgin paper. This point is shown with red circle in the diagram. It shows that after this limit, recycled paper utilization in economically not feasible because the similar cost is being used for producing paper from virgin pulp.

SUMMARY OF INFORMATION ABOUT THE COMPETITORS

MUHAMMAD ALI SHUJA (Team Leader and Contact Person)

Date of Birth: 29th November 1983
Education:
Master in Applied Sciences (MAS) Economics, AERC, University of Karachi
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SANA TASADUQUE ASKARI

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MUHAMMAD SALMAN

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SHEBA TASADUQUE ASKARI

Date of Birth: 14th July 1980
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Phone 0092-333-2722561 E-mail:sheba_askari@yahoo.com

Detailed CVs are also attached with this proposal

Note: Two senior economists and an Ex-SIEMENS Electrical Engineer having 30 years of working experience have agreed to help us in policy making when proposal is approved.

CURRICULUM VITAE OF PARTICIPANTS

Muhammad Ali (Team Leader/Contact Person)

Education

Degree	Board / University	Year	Div. / Grade/ GPA
M.A.S (Masters in Applied Sciences) Economics	Applied Economic Research Center, University of Karachi.	2008	3.65 GPA (Second Position)
M. Com (Finance)	Federal Urdu University, Karachi	2006	3.53 GPA
B.Com	University of Karachi	2003	2nd Division

Other Qualifications:

GAT-I (Local GRE) 2008 : 72 Marks (98.84 Percentile Score)

Achievements

Won First Prize in report writing competition on the theme **"Connecting People with Disabilities: ICT Opportunities for All"** on World Telecommunication and Information Day held on 17th of May 2008 in Marriott Hotel Islamabad. Award was received from **Prime Minister of Pakistan Mr. Syed Yousuf Raza Gilani.**

Personal Details

Date of Birth	:	November, 29 1983
CNIC #	:	42101-5338766-5
Address	:	Flat # F-2, Jasmine Plaza, Plot # SD-28
		Block – G, North Nazimabad, Karachi – 74700, Pakistan
Mobile	:	+92-3323228982
Email	:	alionline83@yahoo.com
Father Name	:	Shuja Uddin
Marital Status	:	Unmarried
Religion	:	Islam

H.No 2333, A/96, jail road, Upper story, Hirabad, Hyderabad, Sindh, Pakistan
Phone 00923322631399
E-mail:sana_askari@yahoo.com

Sana Tasaduque

ACADEMIC QUALIFICATIONS

Bachelor in Information Technology BS.I.T (Hons) 4 year degree
University of Sindh, Jamshoro, Pakistan.

H.S.C
Govt: Nazareth Girls College, Hyderabad, Pakistan.

S.S.C
St.Mary's Convent Girls High School, Hyderabad, Pakistan.

CERTIFICATION

Certification in English language
Pakistan American Cultural center (PACC)

Other Qualification

NTS GRE/GAT (Graduate Assessment Test) Subject
Subject: **Computer Engineering**
Passed: **September 2007**

AWARDS RECIEVED

3rd Prize given by Yousuf Raza Gilani Prime Minister Pakistan, in All Pakistan **Paper writing competition** organized by Pakistan Telecommunication Authority PTA, on World Telecom day 17th M**ay 2008**, at Islamabad.

3rd Prize given by Federal I.T minister in All Pakistan IT, Engineering and Business Gala, **NASCON 06 Movie competition** At NU-FAST University, Islamabad, Pakistan

Muhammad Salman

Flat# F-2 Jasmine Plaza Block "G" North Nazimabad Karachi.
Tel: 0346-3194368
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EDUCATION

Degree	Institute	Result
S.E. (Industrial and Manufacturing Engineering)	NEDUET	1132/1500 (75.5%)
F.E. (Industrial and Manufacturing Engineering)	NEDUET	1116/1500 (74.4%)
HSC(Pre-Engineering)2005	Adamjee Sci. College	77%
SSC 2003	Ali Ali School	87%

COMUTER SKILLS

- MS – Office(2007)
- Solid Edge
- PRO-E
- Auto Cad
- C++
- Visual Basic
- Adobe Photoshop CS2

OTHER SKILLS

- Good communication skills.
- Report writing.

PROJECT

- Did successful internship project at NATIONAL FOODS LTD. on the topic of "Determination of optimal safety stock level of packaging material" and "ABC analysis of Packaging, Raw and General Materials"

MEMBERSHIP

- Applied of SME (Society of Manufacturing Engineering) membership

PERSONAL INFORMATION

Father name: Shuja Uddin
DOB: 30-06-1987
NIC: 42101-8810092-5

Sheba Tasaduque Hussain Askari

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Mobile: 0092-333-2722561

Personal Information	
Date of Birth:	14th July 1980
Religion:	Islam

Academic Qualifications
One Year Course Work MS Computer Science **Equivalent to MPhil (Computer science)**
Bachelor in Computer Science B.C.S(Hons) 4 year degree **Equivalent to M.S.C (Computer science)**
H.S.C **Govt: Nazareth Girls College, Hyderabad, Pakistan.**
S.S.C **St. Mary's Convent Girls High School, Hyderabad, Pakistan.**

Prizes

1. **Shield and Certificate from** Ghulam Ishaq Khan Institute of Engineering Sciences & Technology, Topi, Pakistan at All Pakistan Software Competition Held from 25th to 27th September 2003.
2. **Certificate and Cash Prize as Third Position Holder from** Fast University, Islamabad, Pakistan. at All Pakistan Multimedia Competition 2006 .
3. **Shield** from EXPO ASIA Karachi, Pakistan at International exhibition and conference 2004.
4. **Shield** from EXPO ASIA Karachi, Pakistan at International exhibition and conference 2006.
5. **Certificate** from University of Sindh, Jamshoro, Pakistan for Developing Library System.
6. **Shield** from Continuing Education of Mehran UET as Managing committee member at Faculty Development Course with HEC collaboration.