

Project II

***‘Forum for  
Sustainable Ideas  
from India’***

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M.Des.

Visual Communication

**Guide**

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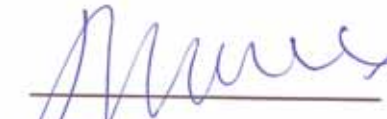
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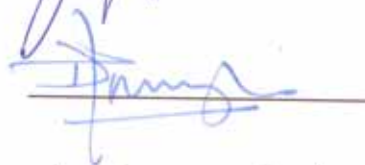
## Approval Sheet

The Visual Communication Project II titled—  
'Forum for Sustainable Ideas from India' by  
Vallabh Munshi, (o8625003) is approved towards  
partial fulfilment of the requirements for post  
graduate degree of Master of design in Visual  
Communicaton.

Project Guide:

A handwritten signature in blue ink, appearing to be 'Munshi', written over a horizontal line.

Chair Person:

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External Examiner:

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**Industrial Design Centre**

Indian Institute of Technology, Bombay

July–November 2009



## Declaration

I declare that this written submission represents my ideas in my own words and where others ideas or words have been included, I have adequately cited and referenced the original sources.

I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/ data/ fact/ source in my submission.

I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.



Vallabh Prasad Munshi

08625003

November, 2010

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Indian Institute of Technology, Bombay.



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## *Forum for Sustainable Ideas from India*

### **Contents**

#### **1. Introduction**

Sustainable Development  
Applications of sustainability  
Mind Map

#### **2. India & Sustainability**

#### **3. Crisis**

Learning everyday  
Sharing sustainable alternatives  
Relative Information  
Needs

#### **4. Project Abstract**

#### **5. Case Study & Literature**

Information pool  
Wikipedia, Facebook  
TreeHugger etc.

#### **6. Case Study, evaluation**

Total Beauty of Sustainable Products

#### **7. Categories Of Sustainable Ideas**

#### **8. Evaluation criteria for the forum**

Cyclic  
Efficient  
Renewable source  
Practice  
Intention/ logic

#### **9. Offline forum/ Mock up**

Conclusions

#### **10. Project**

Information Architecture  
Low fidelity Prototype  
Conclusions  
High fidelity prototype



## Introduction

### Sustainable Development

“DEVELOPMENT that meets the needs of the present without compromising the ability of future generations to meet their own needs”.<sup>[1]</sup>

Sustainable development is defined as a pattern of social and structured economic transformations which optimizes the economic and societal benefits available in the present, without jeopardizing the likely potential for similar benefits in the future.

A primary goal of sustainable development is to achieve a reasonable and equitably distributed level of economic well-being that can be perpetuated continually for many human generations.

Sustainable development implies using renewable natural resources in a manner which does not eliminate or degrade them, or otherwise diminish their usefulness for future generations. It further implies using non-renewable or exhaustible mineral resources in a manner which does not unnecessarily preclude easy access to them by future generations.

Sustainable development also requires depleting non-renewable energy resources at a slow enough rate so as to ensure the high probability of an orderly society transition to renewable energy sources.<sup>[2]</sup>

Sustainability has become such a wide-ranging term that it can be applied to almost every facet of life on Earth, from a local to a global scale and over various time periods.

This is not about obvious things like recycled paper or electric cars. We must expand our horizons and start looking at everything around us.



## Mind Map

A mind map is a creativity and problem-solving technique that involves the spontaneous generation of as wide a spectrum of ideas as possible.

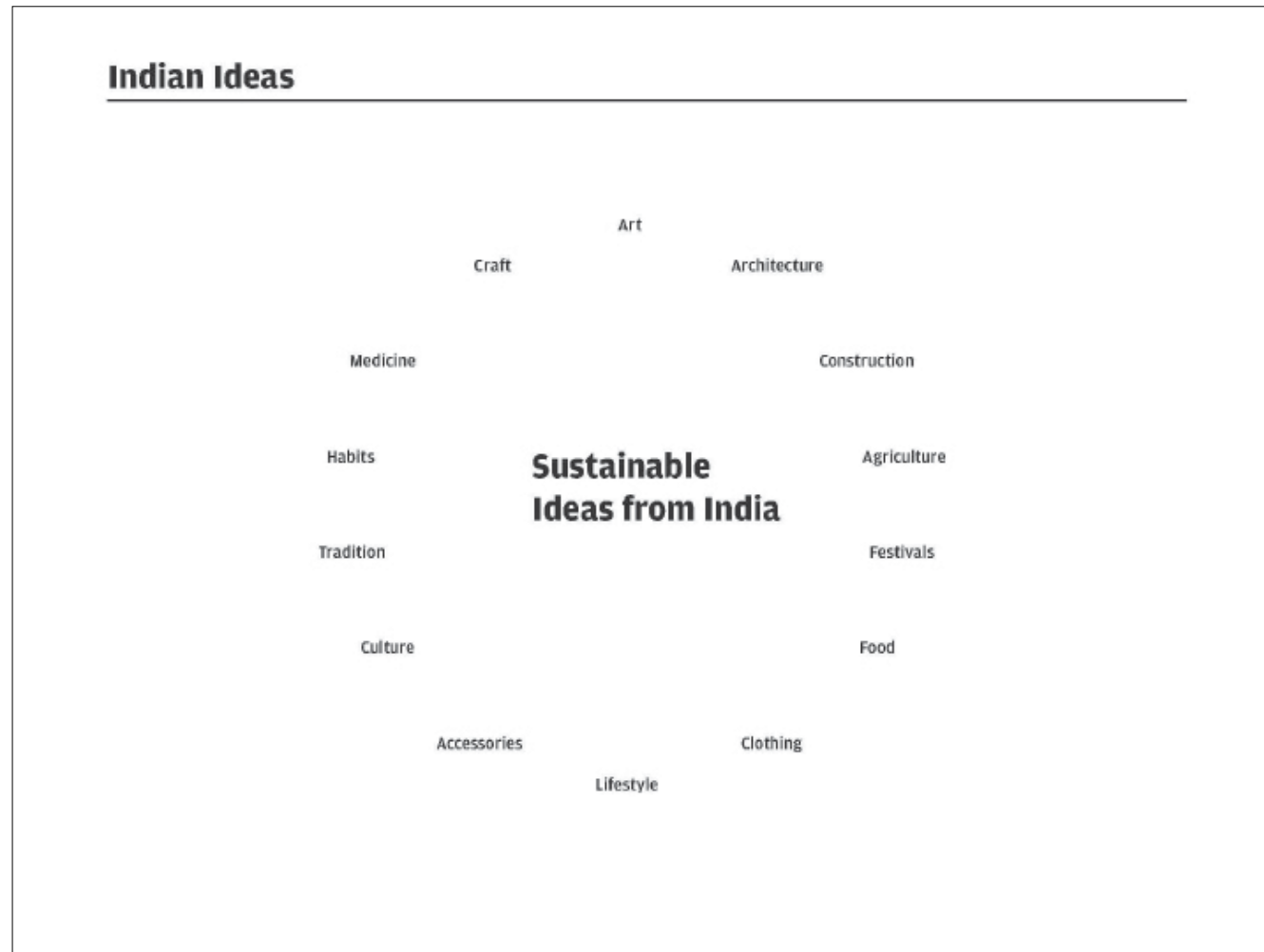
The elements of a given mind map are arranged intuitively according to the importance of the concepts, and are classified into groupings, branches, or areas, with the goal of representing semantic or

other connections between portions of information.<sup>[6]</sup>

The reason for sketching this mind map was to recall existing memories. Here, the elements are grouped together based on their relation with sustainable development for example transport, pollution, efficiency, fuels, waste etc.



## India & Sustainability



## 2. India & Sustainability

INDIA has always been a sustainable country. It is a country where nature is worshipped, plants, trees and animals are considered as sacred and so is the wind, sky, rain, water, earth and fire.

People here have lived close to nature and have inherited a rich culture, which takes care of the nature by the means of myths, rituals, festivals, religion etc. Destroying nature is also considered as a taboo. This culture that we live in is very valuable because it has protected our natural resources from getting polluted and exploited.

Other than the culture, we have inherited a way of life which naturally reduces, re-uses and recycles waste, in fact waste is considered as lost profit so it is used and re-used till its limit. For example tin cans are re-used as containers, newspaper is sold for scrap and recycled, products and gadgets are repaired and re-used. In India, the use and throw culture does not exist. Ultimately all these qualities come down to consumption, which means Indians typically consume less which means less has to be manufactured.

Another property of Indian products is that it is organic. Be it construction material or medicine (*ayurveda*), they are cyclic, eco-friendly and when discarded can be digested by the earth (biodegradable). Not only the products but its manufacturing process is safe and eco-friendly.

Today, there is an urgent need to recognize and realize the Indian way of life which has always been sustainable. The figure on the left is a mind-map of some sustainable ideas from India which have changed in the recent past. These need to be revived and brought back to practice.

### 3. Crisis

PEOPLE loosely know about environmental problems, They are also aware about the man-made conditions like global warming, climate change, but they seem to be doing little.

Nobody challenges our way of life. No consumers are demanding better versions in terms of environmental performance. Most people simply haven't thought about it, especially when the price and the user performance is acceptable. People are choosing convenience over environment.

#### We learn every day

Ever since we have realized the threat to environment, there have been notable contributions in the field of sustainability. In fact innovations and discoveries are happening everyday! Now, sustainability is a hot topic and if we look at the newspapers etc, there is always an article covering some contribution for sustainability.

It is sad that unless strict laws are made, such ideas remain in the news and are not applied, sometimes they are also forgotten. It is not that everybody

is insensitive, but because people choose what is available and what is the most convenient.

#### Where are the alternatives?

Of course there are alternatives, it is just that everybody does not know everything. Options should be out in the open, alternatives should be available. There should be a platform to see all the alternatives.

#### Relative Information

Facts should be read and compared with each other. We need to share our ideas with everyone and select the ones best suited for us. Relative information is necessary so that there are options to make choices.

#### Needs

There is need to have a forum where everybody can contribute by giving ideas, ideas which can then be compared to each other on some common parameters. A value system to analyse these ideas needs to be developed. There is also a need that

some alternatives be from India so that it can be applied locally. There should be networking among eco-sensitive people so that they can help each other and work in collaboration for bigger projects and campaigns.

In order to respond to some of the above mentioned problem, the following project is proposed:

***‘An Online Forum For Sustainable Ideas From India’***

The objectives of this forum are:

1. To resurface sustainable Indian thoughts.
2. To evaluate products and ideas with respect to sustainability.
3. To show comparative information so that people can make informed choices.
4. To make a forum which will remain active due to discussions and continuous contributions.
5. To make a platform where people can network, advice each other and work in collaboration.

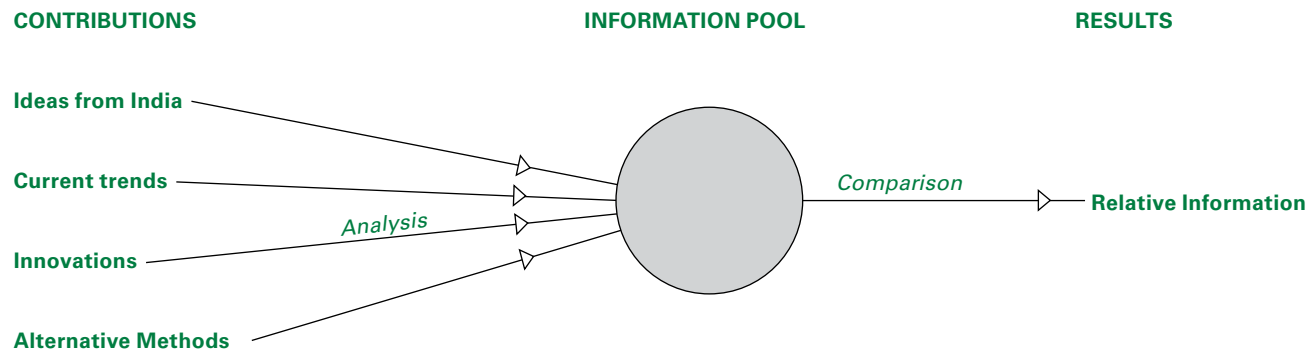
## 4. Project Abstract

### Forum for Sustainable Ideas from India

The idea of the project is to lay a platform for an online forum which will receive contributions from various areas in India for example products, practices, food, clothing, architecture, etc.

These ideas shall be analysed based on some parameters and the results shall be of tangible nature so that they can be compared to each other and a centralised information pool can be created.

Each contribution should spark up more contributions, comments, debates and discussions. Contributors shall be able to network with each other. One of the desired end product is that people should get solutions by searching in the search box. The solutions shall be in the form of a comparative chart which will display all the alternatives available from the information pool. People should be able to add and edit the contributions thereby adding more and more to the pool.



## Case studies and literature

Before starting the project some areas needed to be explored, which were:

### **An online forum on sustainability**

TreeHugger. com, which is a forum which gives green solutions and is a platform where people keep discussing sustainability and sustainable products.

### **A global campaigning organization**

GreenPeace, which is a campaigning organization which protects and conserves environment on a global scale.

### **Information pool**

Wikipedia, which is a free, web-based, collaborative, multilingual encyclopedia where almost all of its articles can be edited by anyone with access to the site. It hosts 13 million articles written collaboratively.

### **Social Networking Sites**

Facebook, My space and Twitter, to learn how online communities are built and how people interact and share information.

### **Evaluation of Sustainable Products**

A book called ‘Total beauty of sustainable products’ by *Edwin Datschefski*

## Definitions

### **Information Pool**

An information pool is a centralised database, where all necessary information for the functioning of the ‘Forum For Sustainable Ideas From India’ will be stored in a standardised way.

### **Forum**

The Forum was the public space in the middle of a Roman city. A gathering place of great social significance, it was often the scene of diverse activities, including political discussions, meetings..

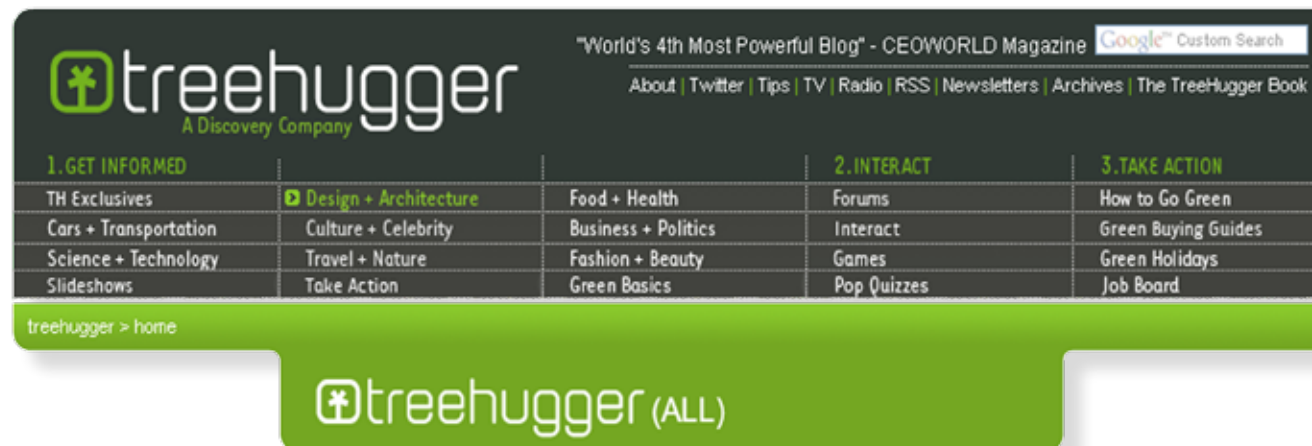
An Internet forum, or message board, is an online discussion site. It originated as the modern equivalent of a traditional bulletin board, and a technological evolution of the dialup bulletin board system. From a technological standpoint, forums or boards are web applications managing user-generated content.

## 5. Case study & Literature study

### TreeHugger

TreeHugger is a media outlet dedicated to driving sustainability mainstream. It is a place to look for green news, solutions, and product information. TreeHugger covers a variety of sustainable issues, so one can find quite a lot of tips and solutions to go green in their up to the minute blog, weekly and daily newsletters, weekly video segments, weekly radio show and a user-generated blog, Hugg. They also extend their expertise to companies looking for green guidance.

TreeHugger tries to take care of the fact that most people aren't willing to compromise their current lifestyle in order to improve our shared environment, so it has created a place where one can discover how to maintain or improve their quality of life while reducing our harmful impact on the earth.<sup>[4]</sup>





## Using the site

### Casually

Browse through the day's headlines or in a topic of interest like Cars + Transportation or Food + Health. It has over 24 posts per day and one can be entertained reading that.

### Search for solutions

People can just search for solutions by typing in the search box, it might give a pile of posts from the past years.

### Debate

Comments and questions on any post can spark a debate. Many readers are enthusiastic to talk and comment on issues.

### Go green

People can consult TreeHugger for green guidance which they can apply to their households, professional life, office, industries etc

### Experts

Enter whatever you're researching in the search box at the top of the page and find the most up-to-date answers in the archive which has over 35,000 posts.

## Greenpeace

Greenpeace is an independent global campaigning organization that acts to change attitudes and behaviour, to protect and conserve the environment and to promote peace by:

Catalysing an energy revolution to address the number one threat facing our planet: climate change.

Defending the oceans by challenging wasteful and destructive fishing, and creating a global network of marine reserves.

Protecting the world's ancient forests and the animals, plants and people that depend on them.

Working for disarmament and peace by tackling the causes of conflict and calling for the elimination of all nuclear weapons.

Creating a toxic free future with safer alternatives to hazardous chemicals in today's products and manufacturing.

Campaigning for sustainable agriculture by rejecting genetically engineered organisms, protecting biodiversity and encouraging socially responsible farming.<sup>[5]</sup>

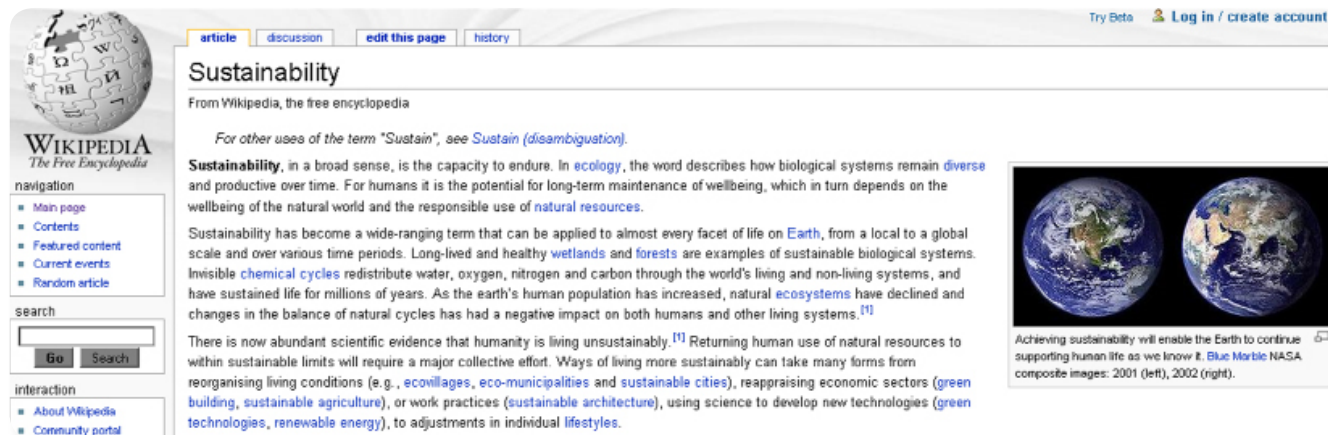


## Wikipedia

Wikipedia is a free,web-based, collaborative, multilingual encyclopedia project supported by the non-profit Wikimedia Foundation. Wikipedia's 13 million articles have been written collaboratively by volunteers around the world, and almost all of its articles can be edited by anyone with access to the site. It was launched in 2001 and is currently the largest and most popular general reference work on the Internet.

## Editing model

In departure from the style of traditional encyclopedias, Wikipedia employs the open editing model called “wiki”. Except for a few vandalism-prone pages that can be edited only by established users, or in extreme cases only by administrators, every article may be edited anonymously or with a user account, while only registered users may create a new article. No article is owned by its creator or any other editor, or is vetted by any recognized authority; rather, the articles are collectively owned by a community of editors.





## Social Networking

A social network service focuses on building online communities of people who share interests and/or activities, or who are interested in exploring the interests and activities of others. Most social network services are web based and provide a variety of ways for users to interact, such as e-mail and instant messaging services.

### Services which people use

Contact friends and send them messages.

Update their personal profiles to notify friends about themselves.

Join networks organized by city, workplace, school, and region, etc.

It helps users meet new friends and maintain existing relationships.

Microblogging, which is a form of multimedia blogging that allows users to send brief text updates or micromedia such as photos or audio clips and publish them, either to be viewed by anyone or by a restricted group which can be chosen by the user.



Join groups, discuss and network.<sup>[9]</sup>

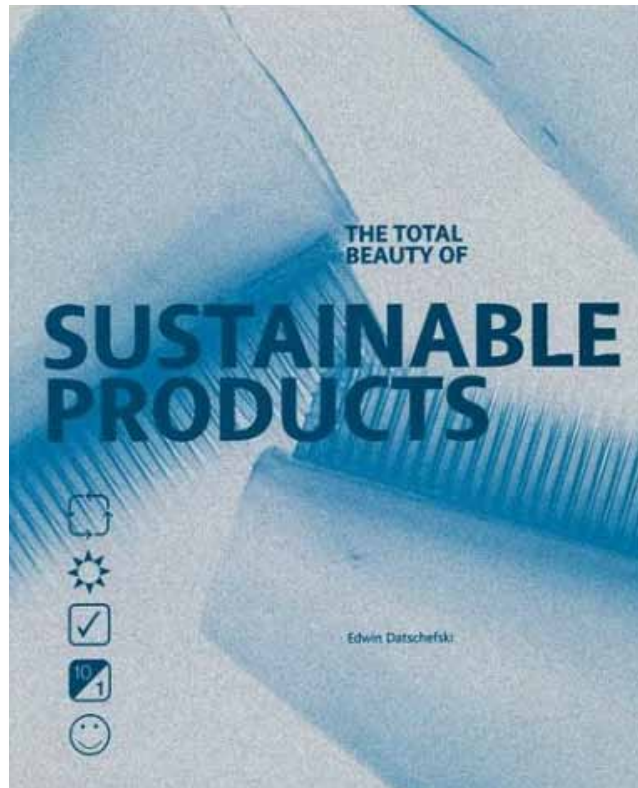


Host events, invite people and network.<sup>[10]</sup>



Simply like ideas, people need not really comment.<sup>[11]</sup>

## 6. Case study for evaluation



### **The Total Beauty Of Sustainable Products by Edwin Datschefski**

#### **Summary of the book**

Ecological and social issues are becoming more important than ever before, and a vital new role is opening up for design. Beautiful looking products have an underlying ugliness, all the environmental and social impacts have to be revealed and products that have a 'total beauty' have to be created. These products also known as 'sustainable products', are those that are best for people, profits and the planet.

Despite all the complex life cycle analysis that people make, there are relatively few improvement options open to product developers. This means that it is easier to come with environmental innovations.

About 500 sustainable products were reviewed and it was found that 99% of all environmental solutions use one or more of the five principles. All these five principles have been defined closely in the book.

## Five design principles described in the book

### 1. Cyclic

Products that are made from compostable organic material or from minerals which are continuously recycled in a closed loop.

The basic protocol for cyclic product manufacture is very simple: use materials in cycles, and instead of emitting waste and poisons, only emit materials that can be 'food' for something else.

We've often heard that we're running out of resources. But there are still the same number of atoms around on the earth's surface—we have simply converted atoms into molecules that are of no use to us. With continuous cycling of both organic and inorganic materials, we will never run out of the resources that we need.

### 2. Solar

Products in manufacture and use consume only renewable energy that is cyclic and safe.

The solar requirement means that all materials flow and energy use is powered by photosynthesis,

muscle or renewable energy. This covers products with mounted photo voltaic solar cells, or those hooked up to a mains supply powered by wind, wave biomass or PV, through to products that are grown or operated by hand. This also applies to embodied energy which is the energy used to provide a service or to manufacture and distribute a product.

Products that consume energy when they are used often can have their environmental performance increased significantly by switching to different forms of power. For vehicles and household appliances, the impact of energy in use is far bigger than the environmental impacts caused by manufacture or disposal.

### 3. Safe

All releases to air, water, space or land are food for other systems.

The definition of safe needs some explanation. A safe process or product cannot chemically or physically disrupt people or other life. A release is a deliberate or accidental discharge of materials to air, water or land. This obviously includes liquid effluent from pipes, smoke from chimneys, and

spills onto the ground. However, as all products are ultimately disposable, it also includes products themselves. If there is no plan or system for product take back and full re-use and cyclicity, then every product sold represents a toxic release. 'Air, water, land' is obvious, and 'space' is included in the definition and refers to the outer space, because more and more junk is being left in the orbit. 'Food for other systems encapsulates the idea that in nature, although there are waste products such as autumn leaves, there is always another organism that can make use of them.

#### **4. Efficient**

Products in manufacture and use require 90 per cent less energy, materials and water than equivalent products did in 1990.

Many environmental improvements arise from an improvement in efficiency—if you have a washing machine that uses less electricity, then there will be less fuel burnt at a power stations and so fewer emissions and less pollution. The same idea holds for materials use—less metals means less mining and so on.

This concept, known as 'eco-efficiency', is very

popular, perhaps because getting a job done using less energy means there is often a cost saving as well as an environmental benefit. And materials efficiency makes obvious sense for business, as it means you can sell the same chunk of stuff to more people.

#### **5. Social**

Product manufacture and use supports basic human rights and natural justice.

Human capital is our most valuable resource and so we should look after it. Exploitation and maltreatment of our fellow man is unsupportable, yet companies do it all the time because such abuse is hidden to the end-user. Do we deliberately design our products so that they involve child labour and unsafe working conditions? Of course not. But unless we use our influence in the design process to actively design these problems out, they will still be there. The social aspects of the product life cycle must be considered by the designer.

## Analysis of a sustainable product

### *Radius original toothbrush*

The product below is example of a product in the book which has been analysed by the above mentioned five principles.

On the right side of the figure is a visual value system which has been used to compare this eco-friendly



‘Radius Original Toothbrush’ with a regular toothbrush.

The four symbols represent the principles of products being cyclic, solar, safe and efficient respectively. This particular product is cyclic because it is manufactured by using cellulose grown raw material. It is solar because the raw material requires renewable source of energy for growth. It is safe because it releases less pollutants during manufacture. And, it is efficient because it has four times longer life than the regular toothbrush. The green squares on the sides evaluates the advantage over the regular toothbrush.

Cellulose grown raw material; reusable

and recyclable packaging

Solar grown raw materials

Less polluting releases in manufacture

Four times longer life

## **7. Categories for Sustainable Ideas**

The search results are expected to be in a tangible form therefore all the contributions to the forum should be non-subjective so that they can be analysed through the given criteria. The results also need to be evaluated and compared to each other. All the ideas and thoughts have been categorised into two which are:

1. Products; and
2. Practice

### **Products**

This category of sustainable ideas covers objects which exist physically in nature or are made by man, for example construction material, food, clothing, products, objects, packaging, gadgets, equipment, tools, natural and man-made resources, etc.

### **Practice**

This category of sustainable ideas covers the way humans live which can also be called as habits, behaviour, activities, rituals, technology, processes, and practices

## 8. Parameters for evaluation

As decided above, the categories of the Sustainable Ideas are *products* and *practices*, more categories are required within them so that they can be analysed critically.

The categories are similar to the five principles from *Edwin Datschewski's* book — ‘The Total Beauty of Sustainable Products’.

For *products*, following are the categories or the criteria for evaluation:

### 1. Cyclic

What is the composition of the product, can they be recycled in a closed loop or digested by nature?

### 2. Renewable source

What kind of energy (renewable, exhaustible, mechanical etc.) does the product consume during its manufacture and use?

### 3. Efficiency

What is the efficiency of the product, what is its productivity and how many times can it be used

till it has to be disposed off?

The second category of practice cannot be objectively evaluated therefore Practices do not have any criteria for assessment but they need to be described in brief, and along with its description, the reason or the actual intention behind the practice needs to be mentioned.

## 9. Offline Forum

A paper prototype was prepared to test the methodology by which the users were supposed to contribute in the Forum for Sustainable Ideas from India.

An offline version of the forum was initiated in a small system first so that it could be tested in a controlled and a moderated environment.

The forms on the right are designed according to the parameters of analysis which were discussed and decided above.

They were given away to people who were interested to contribute in the area of sustainability and India.

People started new topics and contributed and commented on each others topics as well.

## Products' forum

Forum for Sustainable Ideas From India

**Products** Design, Development, Production, Distribution, Application

**Offline comparative chart for authors**

Name: \_\_\_\_\_

Topic: \_\_\_\_\_

**CRITERIA FOR SELECTION**

1. **Feasibility**  
Possibility of the product to be included as a design.

2. **Manufacturing**  
Type and amount of energy required for its production.

3. **Efficiency**  
Number of times of the life span of the product (based on flow).

| Description | Cycle | Manufacturing | Efficiency |
|-------------|-------|---------------|------------|
|             |       |               |            |
|             |       |               |            |
|             |       |               |            |
|             |       |               |            |
|             |       |               |            |
|             |       |               |            |

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## Practices' forum

Forum for Sustainable Ideas From India

**Practice** Design, Development, Production, Distribution, Application

**Offline comparative chart for authors**

Name: \_\_\_\_\_

Topic: \_\_\_\_\_

**CRITERIA FOR SELECTION**

1. **Description of practice**  
How the practice is being used.

2. **Reason/Logic**  
Actual intention behind the introduction of practice.

| Description of practice | Reason/Logic |
|-------------------------|--------------|
|                         |              |
|                         |              |
|                         |              |
|                         |              |
|                         |              |
|                         |              |

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\_\_\_\_\_

| Description                                                                                          | Cyclic                      | Manufacturing                           | Efficiency                          |
|------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------------------|-------------------------------------|
| Matta - stores water                                                                                 | Made from natural materials | Human powered mech. energy can be used. | Natural cooling of water            |
| Use product with multiple usage.<br>Folding chair that generates electricity to light a reading lamp | Activity generates energy.  |                                         | Human energy for generating energy. |
| Banana leaf                                                                                          | Biodegradable               | From nature                             | Excellent containing properties.    |

|                      |                                                                                                              |
|----------------------|--------------------------------------------------------------------------------------------------------------|
| - Greywater system   | - Water can be reused for all other purposes other than drinking<br>- nutrients & org. matter as fertilizers |
| - Composting Toilets | - Eliminates a huge % of <del>expended</del> domestic water use.                                             |

| Description of practice                   | Reason/ logic        |
|-------------------------------------------|----------------------|
| Use smaller plates, Katori's to eat food. | Less food is wasted. |

|                       |                                                              |
|-----------------------|--------------------------------------------------------------|
| - Storing old clothes | - Reused by smaller ones<br>- Exchanged for some other stuff |
|-----------------------|--------------------------------------------------------------|

## Inferences

Most users fill the forms very casually.

Some people fill the forms meticulously and with full details.

There should be scope of starting new categories and new areas in the forum.

The nature of the topics that people contribute have a wide range, some are very trivial, some very technical, some are serious and some are not really of that importance.

Even a small contribution can spark off a discussion thread.

It is easier to contribute to an existing topic rather than starting a topic of your own.

## 10. The Project

### Information Architecture

Users can feel lost even in a relatively small information space that is not well organized. The problem becomes even greater when you consider the possibility that people can arrive at any given web page from any other page on the web. They may not always enter your site from your home page.

Information architecture focuses on designing effective navigation, organization, labeling, and search systems. It is an interdisciplinary field that draws upon the research and practices of information and library science, computer science, graphic design, and psychology. The role of the information architect is crucial in the planning and conceptual design/redesign stages of web development, as good information architecture lays the foundation upon which a web site is built.

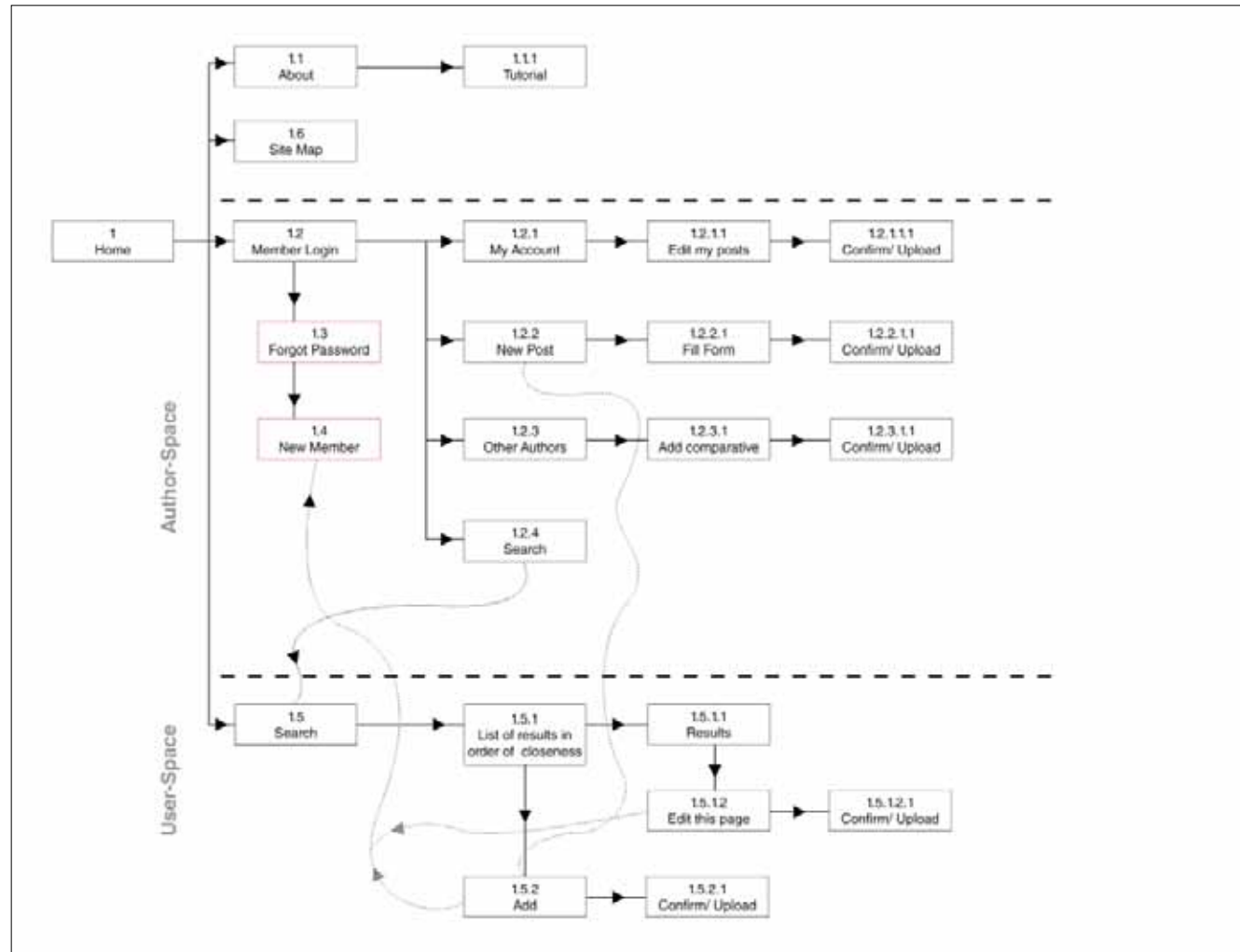
Following are the expected users activities on the forum, the information space mapping is done while keeping these activities in mind.

1. Casual browsing, people would like to browse

through the forums, comment on some topics.

2. New users would want become a members of the forum.
3. A researcher would like to search for topics and like to communicate with other contributors.
4. Some people would type in the search box to find specific solutions.
5. A person looking for consultation would like to network with contributors or experts.
6. Experts would add or edit information on a regular basis and would also try to contribute to the existing or the new posts. They would also be proactive in providing advice to others as well as to learn from others.

## Information Architecture of the forum



## Low fidelity prototype/ Mock up

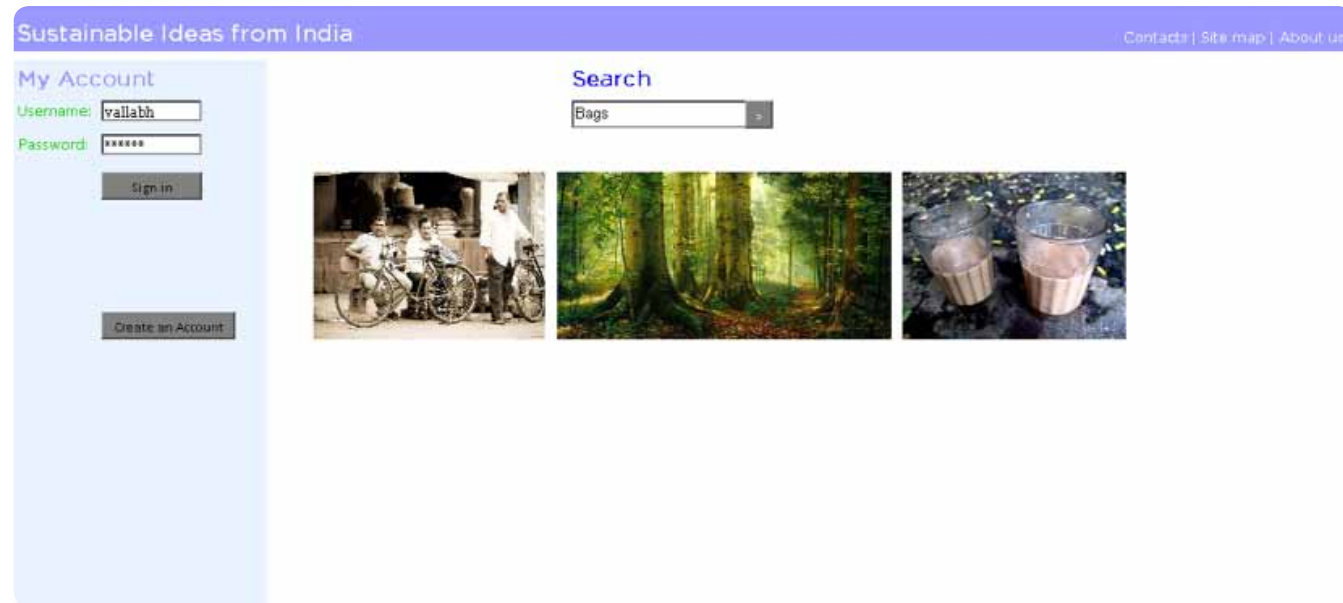
A prototype that is sketchy and incomplete, that has some characteristics of the target product but is otherwise simple, usually in order to quickly produce the prototype and test broad concepts. Mock up is another term for prototypes, usually referring to low-fidelity prototypes, such as paper illustrations, screen-shots, or simple configurations of screens with limited interaction. This particular mock-up was done in a freeware called *Axure*.

## Home

This is a screen-shot of the home page which lets the users to sign in into their own accounts.

People can simply type in the search box to get required solutions from the information pool.

Interested users can create their account on this forum.



## Search Results

The user has searched for the topic 'bags'. This particular search resulted in a page which shows comparative information on different types of sustainable bags.

comment on the topics and network with other contributors.

From here, people can continue search or make contributions to the forum by adding to or editing the given information. People can also casually

Sustainable Ideas from India

Contacts | Site map | About us

Search

Bags

Indian Products > Bags > Shopping bags

| Images                                                                              | Product | Cycle             | Solar                          | Safe                 | Efficient     |
|-------------------------------------------------------------------------------------|---------|-------------------|--------------------------------|----------------------|---------------|
|    | Cloth   | Biodegradable     |                                |                      | Multiple uses |
|   | Jute    | Biodegradable     |                                |                      | Multiple use  |
|  | Paper   | Biodegradable     | Energy required for production | Deforestation        | Single use    |
|  | Plastic | Non-Biodegradable | Energy required for production | Pollution, hazardous | Single use    |

Add

Edit

Comment

enter text...

**Rakesh:** Cloth bags can be made out of old sarees.

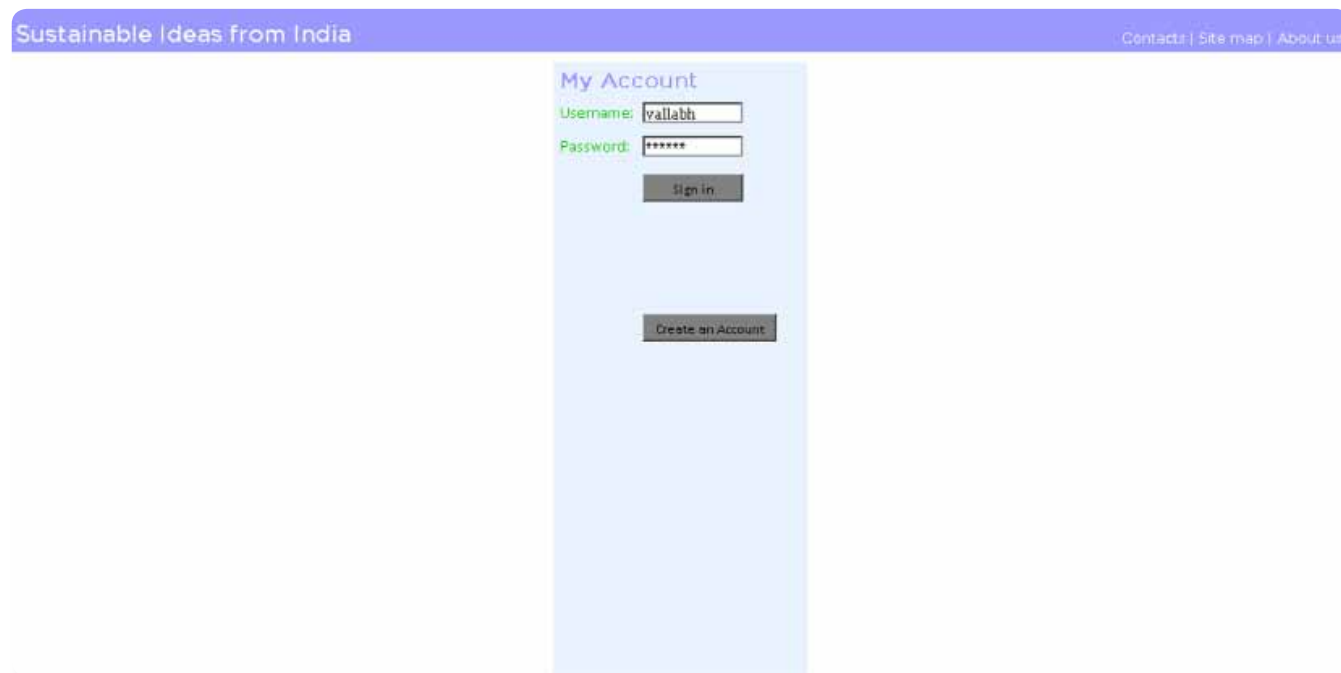
**Arun:** Jute bags are really strong and can be used to carry grocery.

**Sanjay:** Polythene bags are cheap and available everywhere.

## Log in Prompt

The log in prompt reminds people to log into their accounts because only members can edit, add information to the forum.

New users can also create an account from this page if they want to actively participate in the forums.



The screenshot shows a web interface for 'Sustainable Ideas from India'. At the top, there is a purple header bar with the site name on the left and navigation links 'Contact us | Site map | About us' on the right. Below the header, the main content area features a light blue box titled 'My Account'. Inside this box, there are two input fields: 'Username:' with the text 'vallabh' and 'Password:' with masked characters '\*\*\*\*\*'. Below these fields is a 'Sign in' button. Further down, outside the light blue box, is a 'Create an Account' button. The overall design is clean and functional, typical of a forum's user interface.

## My account

This is a simulation of how the forum will look after logging into users personal account.

Users can search for topics, add to the topics, comment on the topics.

Add, edit their own posts and forums.

Network with other contributors, authors.

**Sustainable Ideas from India** [Contact us](#) [Site map](#) [About](#)

Welcome Vallabh!

**My Posts**

sacred groves  
chipko  
Milk cans

Add Edit Delete

**Forums**

Festivals  
Newspaper  
Architecture  
Transport

Add

**Search**

Bags

**Indian Products > Bags > Shopping bags**

| Images | Product | Cloth             | Paper                             | Plastic              | State                 | Efficiency    |
|--------|---------|-------------------|-----------------------------------|----------------------|-----------------------|---------------|
|        | Cloth   | Biodegradable     |                                   |                      |                       | Multiple uses |
|        | Jute    | Biodegradable     |                                   |                      |                       | Multiple uses |
|        | Paper   | Biodegradable     | Recycling required for production |                      | Decorative/functional | Single use    |
|        | Plastic | Non-biodegradable | Recycling required for production | Pollution, hazardous |                       | Single use    |

New Edit Comment

Enter text...

Rakesh: Cloth bags can be made out of old sarees.  
John: I have made one with my old pair of jeans

Arun: Jute bags are really strong and can be used to carry grocery.

Sanjay: Polythene bags are cheap and available everywhere.

## New post

This is a simulation of how the forum will look when the user wants to add to the existing comparative.

Users can upload images, and the fill the form as per the analysis criteria.

Sustainable Ideas from India
[Contacts](#) | [Site map](#) | [About](#)

Welcome Vallaah!

### My Posts

sacred groves  
chipko  
Milk cans

Add Edit Delete

### Forums

Festivals  
Newspaper  
Architecture  
Transport

Add

## Search

Indian Products > Bags > Shopping bags

| Images                                                                             | Product | Cycle             | Solar                          | Safe                 | Efficient     |
|------------------------------------------------------------------------------------|---------|-------------------|--------------------------------|----------------------|---------------|
|   | Cloth   | Biodegradable     |                                |                      | Multiple uses |
| <input type="checkbox"/>                                                           | Jute    | Biodegradable     |                                |                      | Multiple use  |
|  | Paper   | Biodegradable     | Energy required for production | Deforestation        | Single use    |
| <input type="checkbox"/>                                                           | Plastic | Non-Biodegradable | Energy required for production | Pollution, hazardous | Single use    |

**Rakesh:** Cloth bags can be made out of old sarees.

**Arun:** Jute bags are really strong and can be used to carry grocery.

**Sanjay:** Polythene bags are cheap and available everywhere.

## **High-fidelity prototype**

A prototype that is quite close to the final product, with lots of detail and functionality. From a user testing point of view, a high-fidelity prototype is close enough to a final product to be able to examine usability questions in detail and make strong conclusions about how behavior will relate to use of the final product.<sup>[8]</sup>

## Forums

**Sustainable Ideas from INDIA**

About Forums Products Practices People

**Search**

Search

☐ Search Forums

**Forums**

| Description      | Author   | Posts | Comments | Last post            |
|------------------|----------|-------|----------|----------------------|
| Sewage Disposal  | Ajay     | 05    | 03       | Fri, Nov 20 08:00 am |
| Public transport | Aniket   | 03    | 05       | Thu, Nov 19 07:00 pm |
| Cups             | Vallabh  | 04    | 11       | Thu, Nov 19 02:00 pm |
| Table-ware       | Priyanka | 11    | 09       | Wed, Nov 18 05:30 pm |
| Transport        | Saurabh  | 06    | 03       | Mon, Nov 16 10:15 pm |
| Bags             | Shiba    | 08    | 13       | Mon, Nov 16 10:15 pm |
| Vegetables       | Saurabh  | 15    | 04       | Sun, Nov 15 08:10 pm |
| Books            | Shashank | 10    | 02       | Sat, Nov 14 10:30 am |

**Sign In**

Username

Password

[Forgot](#)

☐ Keep me signed in

[Do not have an ID?](#)

[Sign up](#)

## Product Profile

The screenshot displays the 'Sustainable Ideas from India' website. The header features the site's logo and navigation links: About, Forums, Products, Practices, and People. The main content area is titled 'Products' and shows a breadcrumb trail 'Bags > cloth bag'. The product is posted by 'Vallabh'. A search bar is located on the left, and a 'Sign In' section with username and password fields is on the right. The product description states that hundreds of plastic bags can be eliminated by using cloth bags, which are made from waste fabric. Below the description, four key benefits are listed: Cyclic, Source, Efficiency, and Safety.

**Sustainable Ideas from India**

About Forums Products Practices People

Search

Search Search

● Search Forums

**Products**

Bags > cloth bag

Posted by Vallabh

**Description**

Hundreds of plastic bags can be eliminated, not only at the stores itself, but as the shoppers take cloth bags rather than plastic home, they reuse the cloth bags at other shopping trips. Waste fabric from garment factories and recycled cloth from clothes can be used to make this, moreover it provides employment to people, especially girls.

**Cyclic** Cloth is biodegradable and can be easily digested by nature.

**Source** No wastage of fuel during production because it is made out of waste fabric.

**Efficiency** These bags can be used many times, people do not throw away these bags.

**Safety** Manufacturing is safe and does not involve hazardous residue.

**Sign In**

Username

Password

Login Forgot

☐ Keep me signed in

**Do not have an ID?**

Sign up

## Relative Results

The screenshot shows a web browser displaying the 'Sustainable Ideas from India' forum. The top navigation bar includes links for Home, Profile, Forums, Products, Practices, and People. A search bar is located in the top right corner. The main content area displays search results for 'Bags'. On the left sidebar, there is a user profile for 'Vallabh!' and sections for 'My Forums', 'My Posts', and 'My Friends'. The search results table lists five types of bags: Cloth bag, Jute bag, Bamboo Bag, Paper bag, and Polythene Bag, each with a description, environmental impact, and a rating. Below the table, there is a 'Comments' section with three entries.

**Search Results: Bags**

| Description   | Cyclic            | Source                     | Efficiency              | Production                  | Rate It |
|---------------|-------------------|----------------------------|-------------------------|-----------------------------|---------|
| Cloth bag     | Biodegradable     | Handloom cotton            | Can be used many times. | Safe                        | ★★★★★   |
| Jute bag      | Biodegradable     | Jute, weaving              | Can be used many times. | Safe                        | ★★★★★   |
| Bamboo Bag    | Biodegradable     | Bamboo, weaving            | Can be used many times. | Safe                        | ★★★★★   |
| Paper bag     | Biodegradable     | Deforestation, paper mills | Can be once or twice    | Pollution during production | ★★★★★   |
| Polythene Bag | Non Biodegradable | Plastic Industries         | Once                    | Pollution during production | ★★★★★   |

**Comments**

- Bamboo bags are not available everywhere, so i prefer jute bags. Priyanka
- Cloth bags can be made out of old pants, jeans make good bags. Aniket
- It is very important that we carry our own bags when we go out for

## Creating Information Pool

The screenshot displays the 'Sustainable Ideas from INDIA' forum interface. The header features the site's logo and a navigation bar with links to Home, Profile, Forums, Products, Practices, and People. A search bar and a 'Log out' link are also present. The main content area is titled 'Add new post' and includes a welcome message for 'Vallabh!'. On the left, there are sections for 'My Forums' (listing Bags, Transportation, Flooring, Waste water, and an 'Add new...' link), 'My Posts' (listing Jute Bag, Kullad, Glass cup, and an 'Add new...' link), and 'My Friends' (listing Priyanka, Shiba, Ajay, and an 'Add new...' link). The central form for adding a new post contains fields for Name, Forum (a dropdown menu currently set to 'Bags'), Description, Cyclic, Source, Efficiency, and Safety. Each of these fields has a corresponding 'enter text...' placeholder. A 'Submit' button is located at the bottom right of the form. The interface is designed with a dark background and orange accents.

Sustainable Ideas from INDIA

Search  
Search Forums  
Log out

Home Profile Forums Products Practices People

Welcome Vallabh!

**Add new post**

Name  
enter text...

Forum  
Bags

Description  
enter text...

Cyclic  
enter text...

Source  
enter text...

Efficiency  
enter text...

Safety  
enter text...

Submit

My Forums  
Bags  
Transportation  
Flooring  
Waste water  
Add new...

My Posts  
Jute Bag  
Kullad  
Glass cup  
Add new...

My Friends  
Priyanka  
Shiba  
Ajay  
Add new...

## Networking with people

The screenshot shows the 'Sustainable Ideas from India' forum website. The header features a colorful abstract background with the site's name and a search bar. A navigation menu includes links for Home, Profile, Forums, Products, Practices, and People. The main content area is titled 'People' and displays a list of forum members with their profiles, details, and activity statistics.

Welcome Vallabh!

**My Forums**

- Bags
- Transportation
- Flooring
- Waste water
- [Add new...](#)

**My Posts**

- Jute Bag
- Kullad
- Glass cup
- [Add new...](#)

**My Friends**

- Priyanka
- Shiba
- Ajay
- [Add new...](#)

### People

| People | Details                                                             | Posts | Forums | Last Post            |
|--------|---------------------------------------------------------------------|-------|--------|----------------------|
|        | <b>Ajay Mittal</b><br>Interaction Designer<br>25, Male, Delhi       | 15    | 19     | Fri, Nov 20 08:00 am |
|        | <b>Priyanka Marawar</b><br>Product Designer<br>24, Female, Thane    | 09    | 06     | Thu, Nov 19 07:00 pm |
|        | <b>Saurabh Tewari</b><br>Architect<br>24, Male, Lucknow             | 17    | 10     | Thu, Nov 19 02:00 pm |
|        | <b>Shashank Khanna</b><br>Architect, Designer<br>24, Male, Murthal  | 05    | 07     | Wed, Nov 18 05:30 pm |
|        | <b>Shiba Sheikh</b><br>Graphic Designer<br>22, Female, Mumbai       | 07    | 00     | Mon, Nov 16 10:15 pm |
|        | <b>Saurabh Srivastav</b><br>Architect, Designer<br>24, Male, Kanpur | 06    | 09     | Mon, Nov 16 12:45 pm |

## Results seen by non-member users

The screenshot displays the 'from INDIA' website interface. The header features the logo and navigation links: About, Forums, Products, Practices, and People. The main content area is titled 'Results' and 'Bags'. It includes a search bar on the left and a sign-in section on the right. The central table lists five types of bags with their respective attributes.

| Description                                                                                     | Cyclic            | Source                     | Efficiency              | Production                  |
|-------------------------------------------------------------------------------------------------|-------------------|----------------------------|-------------------------|-----------------------------|
|  Cloth bag     | Biodegradable     | Handloom cotton            | Can be used many times. | Safe                        |
|  Jute bag      | Biodegradable     | Jute, weaving              | Can be used many times. | Safe                        |
|  Bamboo Bag    | Biodegradable     | Bamboo, weaving            | Can be used many times. | Safe                        |
|  Paper bag     | Biodegradable     | Deforestation, paper mills | Can be once or twice    | Pollution during production |
|  Polythene Bag | Non Biodegradable | Plastic Industries         | Once                    | Pollution during production |

**Comments**

- Bamboo bags are not available everywhere, so i prefer jute bags. **Priyanka**
- Cloth bags can be made out of old pants, jeans make good bags. **Aniket**
- It is very important that we carry our own bags when we go out for shopping, this reduces the consumption of disposable bags. **Ajay**

## References

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9. <http://www.facebook.com/home.php#/group.php?gid=2208322607&ref=search&sid=765504394.3002956154..1>, 5<sup>th</sup> November
10. <http://www.facebook.com/home.php#/event.php?eid=102421450674&ref=ts>, 5<sup>th</sup> November
11. <http://www.facebook.com/home.php?#/group.php?gid=109090767379&ref=ts> 6<sup>th</sup> November