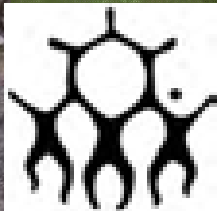


Leveraging Indigenous Knowledge,  
creativity and innovations:  
Honey Bee Network approach

Anil k Gupta, IIMA, Honey Bee Network  
and NIF



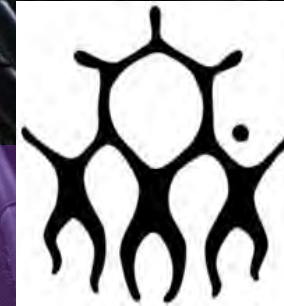
[anilg@sristi.org](mailto:anilg@sristi.org)-[www.sristi.org](http://www.sristi.org)

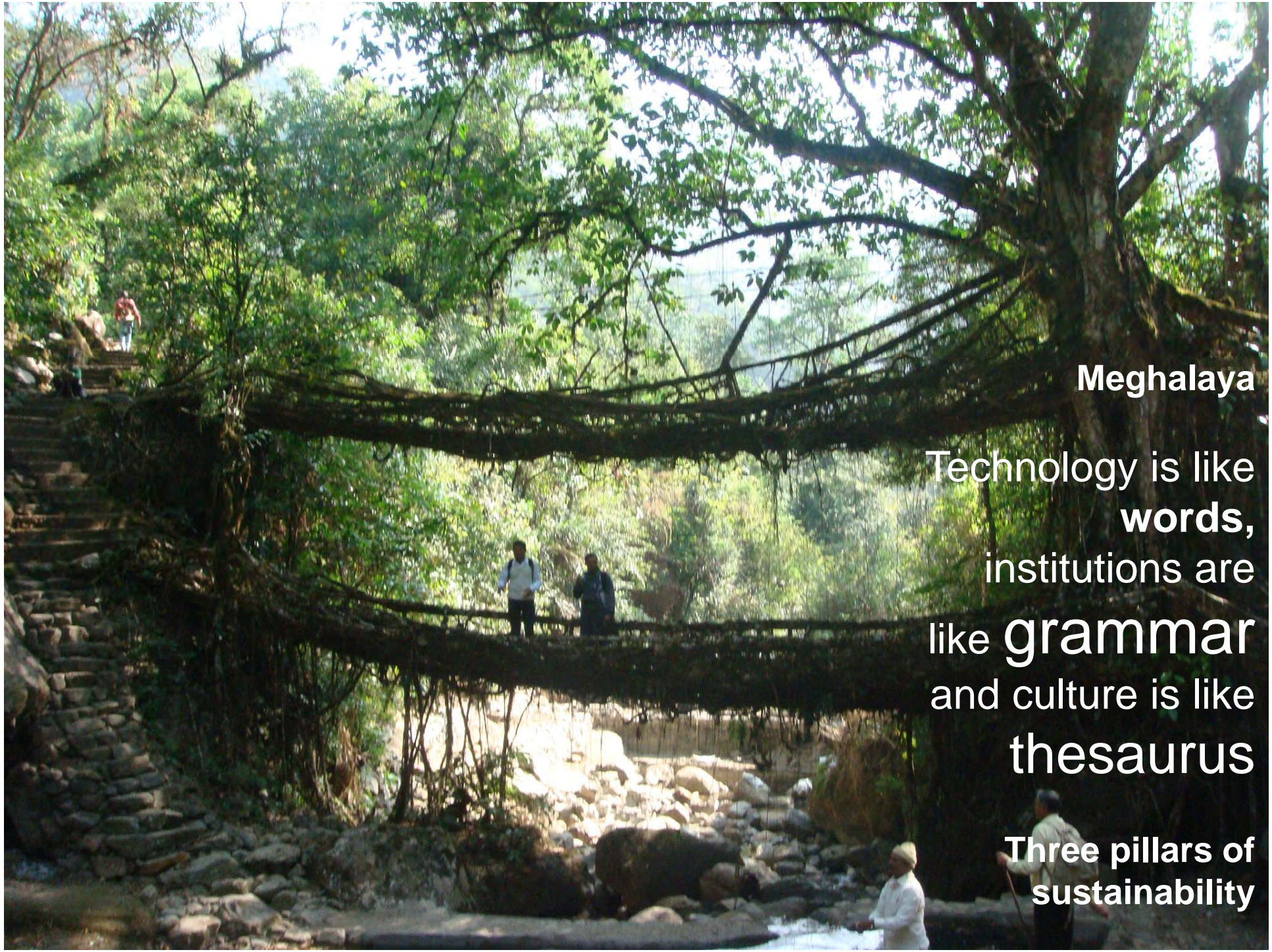
[www.nifindia.org](http://www.nifindia.org)

# Honey Bee Network

founded in 1987-1988

A nameless, faceless innovator or traditional knowledge holder comes into contact with the Network and gets an identity.



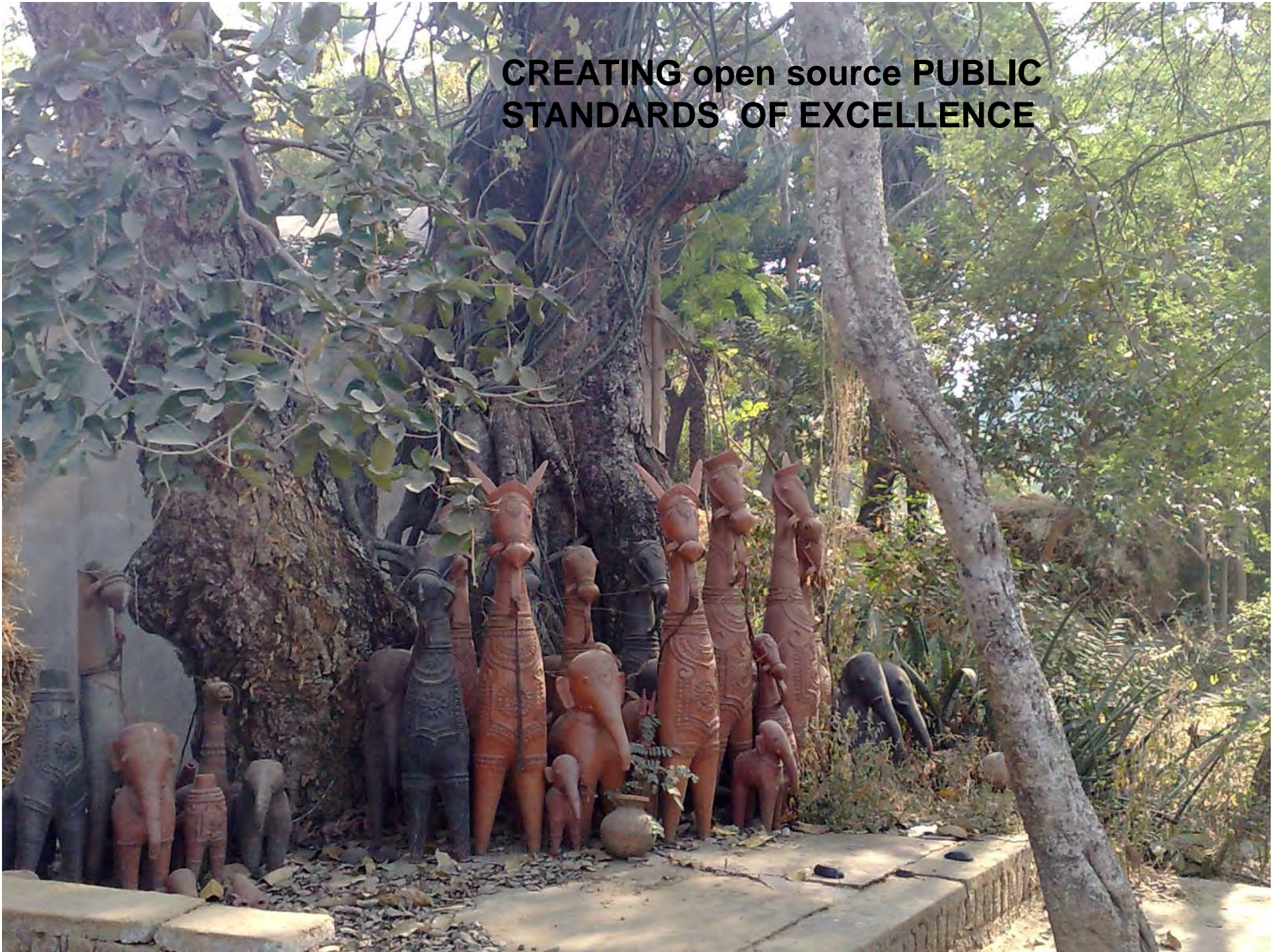


Meghalaya

Technology is like  
**words**,  
institutions are  
like **grammar**  
and culture is like  
**thesaurus**

Three pillars of  
**sustainability**

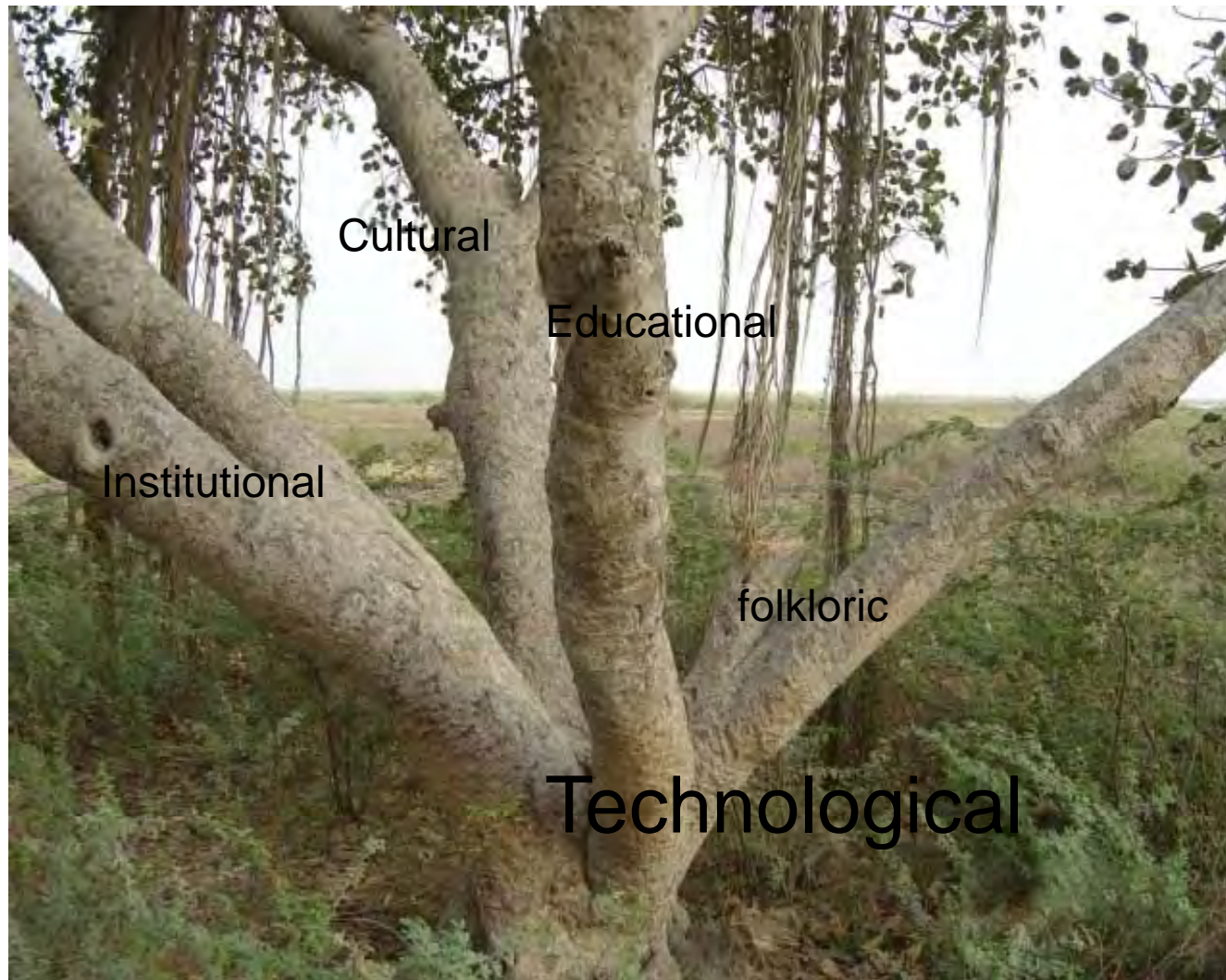
**CREATING open source PUBLIC  
STANDARDS OF EXCELLENCE**



blending

**Passion,  
purpose  
and  
Performance  
Through  
Platforms**

# Mapping the creative mind of the world at grassroots

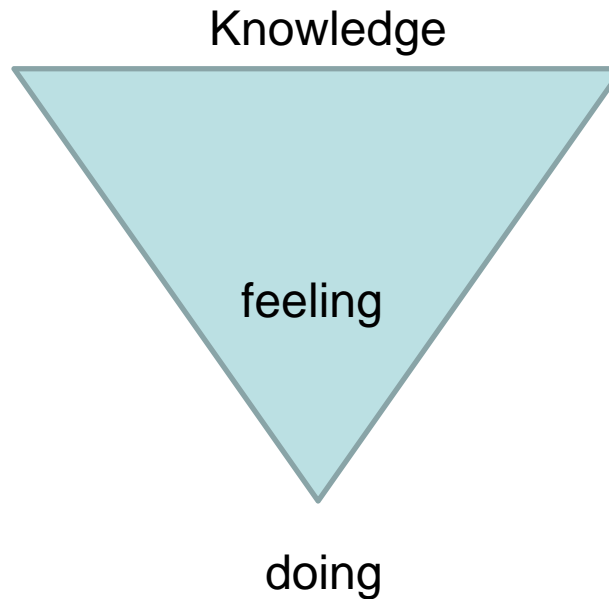


# Inclusive innovations

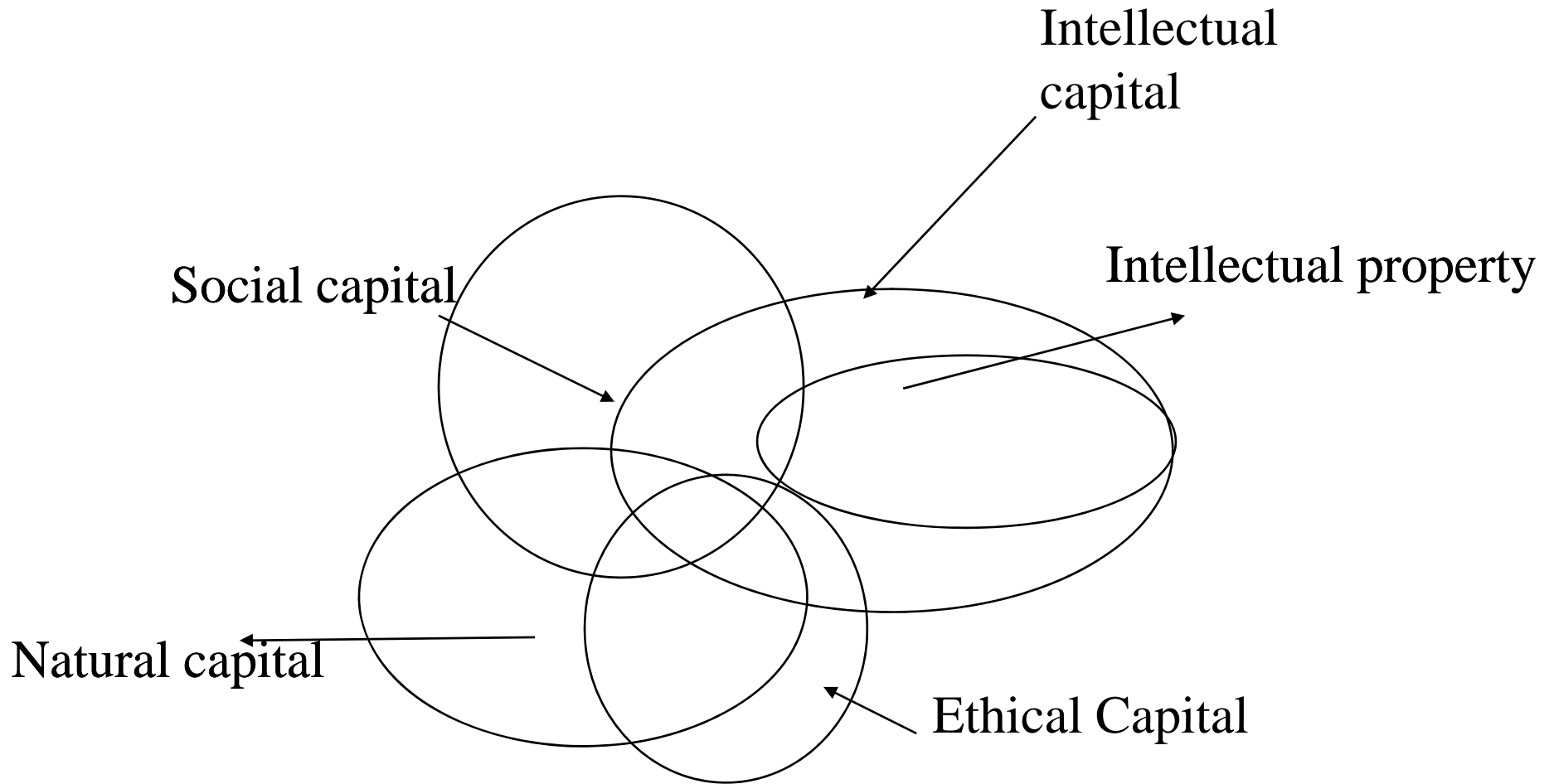
- Dimensions of Inclusion,
- Designing Policies and institutions attending to the needs of neglected
  - Spaces
  - Sectors
  - Social segments
  - Skills and knowledge

# Why do we do so little?

## Knowledge, feeling and doing







Source: Gupta, 2001

# Contested Domains of Local Knowledge

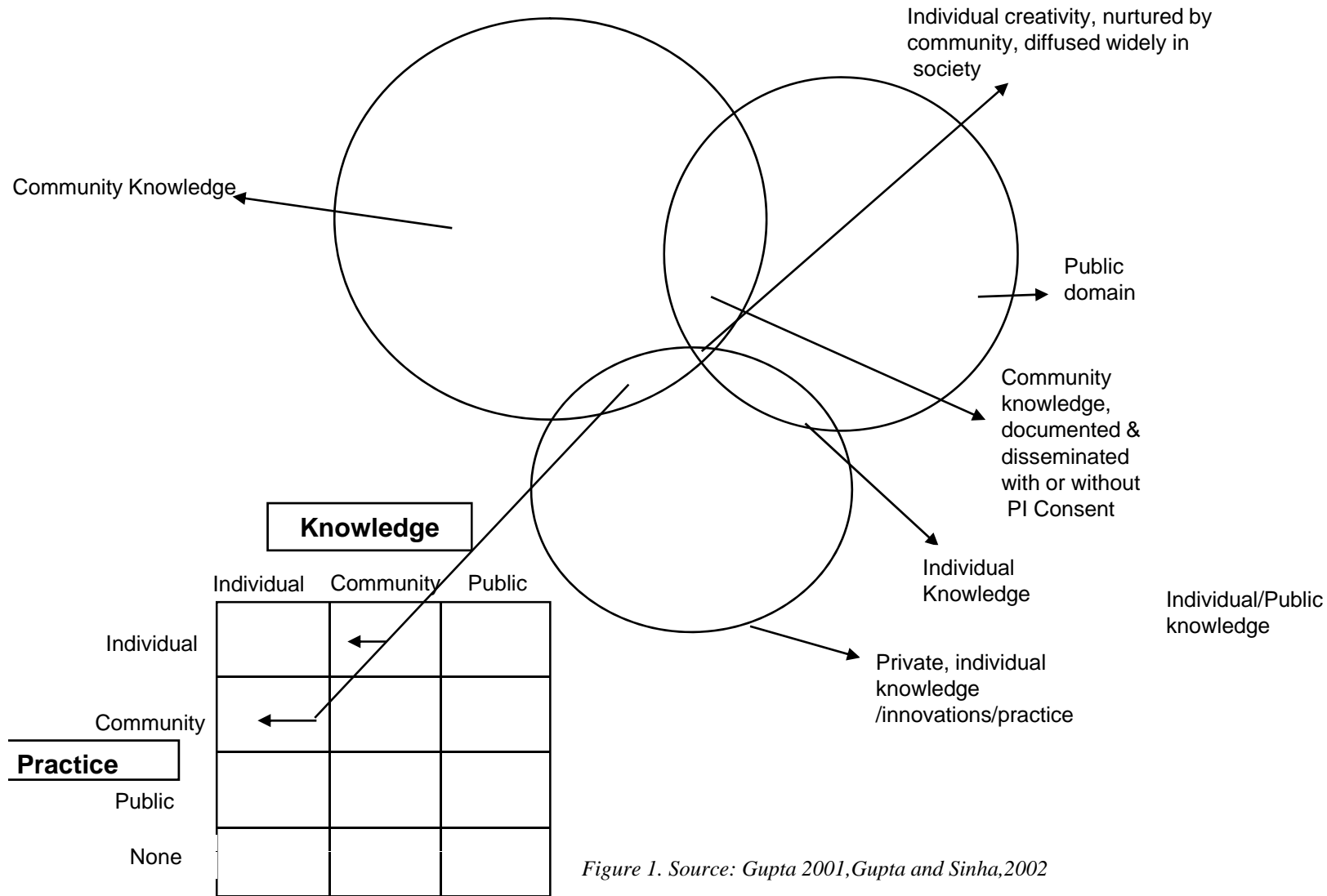


Figure 1. Source: Gupta 2001, Gupta and Sinha, 2002

- Do incentives for innovations matter?
- Obviously yes, but do incentives of same kind will trigger various kinds of innovations?
- What kind of contingent models of rewarding creativity be developed so that innovations for various social segments evolve, mature and diffuse?

### Resource right regimes

Knowledge right regimes		Private	Community	Public	Open access
	Private	PKPR-1	PKCR-2	PKPR-3	PK-OAR-4
	Community	CKPR-5	CKCR-6	CKPR-7	CKOAR-8
	Public	PUBKPR-9	PUBKCR-10	PUBKPR-11	PUBKOAR-12

### How to tailor incentives for combination of resource and knowledge right regimes

# How to reward: Portfolio of Incentives for innovations

## Forms of incentives

		Material	non material
<b>Target</b> Of	individual	<b>material-individual</b>  Ipr or non ipr based awards Awards R and d grants Endowments	<b>non-material-individual</b>  Recognition Honour Memorial
	collective	<b>material-collective</b> Trust funds Venture and incubation funds Collective awards Support for Institution building Endowments	<b>non-material-collective</b>  Policy changes  Pedagogic changes

# How do Innovations occur

When at least one of the three is new

- Method—processes
- Material—entropy, energy,
- Moving along the value chain: Applications  
–externally driven, user driven, community driven

# Innovation Outcomes: 7Cs

- Convergence
- Collaborations
- Creativity
- Convenience, comfort, drudgery  
reduction, efficiency
- Cost reduction, affordability
- Coverage: reaching the unreached
- Consumption -sustainable



## National Innovation Clubs:

- **Search:** Celebrating the decade of innovation by mapping the creativity and innovations in the hinterland
- **Spread:** Disseminating/Cross-pollinating innovations across spaces, social segments and sectors
- **Sense or Benchmark:** Identifying the roots of *persistent problems* and the *mindsets* that trigger their *continued tolerance in society* and solve problem, add value and develop product/service
- **Celebrate:** Recognising achievers in different social segments



# Transcending Frontiers of frugality

- Children
- Tech youth : [techpedia.in](http://techpedia.in)
- Informal sector –NIF

# Service at your door step: Sheikh Jahangir, Jalgaon, Maharashtra



Scooter mounted [flour](#) mill



Scooterbased [washing](#) machine

Fortune at the Top of Ethical and Innovation Pyramid



## Compressed air car

Mr. Kanak Gogoi, Assam, cost per km, 60 paise



## **Bicycle Refrigerator For Rural Areas.**

**Student :** Sagar Chandrakant Gadkar, Amol Raghunath Kachare, Sanjay Shivaji Kachare, Suyog Hanmant Jadhav

**Guided By :** Prof. S. A. Khot

**College :** Padmabhushan Vasanttraodada Patil Institute of technology, Budhgaon, Sangli

It is a 50 lit capacity, refrigerator which is powered by a rear wheel of bicycle. To achieve the required rpm of compressor a larger pulley of dia 20 inch on rear wheel shaft through which a compressor is run

Steady paddling of bicycle at 14 km/hr. for 30 minutes at an ambient temperature of 35 C, brings down the temperature in box to 8 C.

**Autopoeisis** at grassroots for  
inclusive development



creativity, compassion,  
communication and  
collaboration



**Polycentric Learning from multiple sources,  
levels, and channels:**

Future sources of learning,  
creativity and innovation would  
**not be restricted** to formal  
boundaries of organisations.

# Creating **networks**:



**No one organization is likely to possess sufficient information or knowledge to enable it to achieve its goals**

# Shaping future requires working sometimes **without templates:**



Integration of different streams of thought and action require incorporation, assimilation and adaptation of the strengths of each system





Shadows of sustainable spirit: trying to look for **frugal, diverse, resilient and simultaneous solutions**, as nature does all the time

# Power of long term dreams

- A page from Japanese history
- 200 year long edu policy , 1860s

**Inclusive development  
through formal and informal  
innovations**

**Some pointers towards  
innovations but also inertia**

# Emerging Models of innovations

- New models of innovations:
  - a) Building upon what disadvantaged **people are rich** in: *inability to live with problems unsolved –overcoming inertia*
  - b) **Empathetic** innovations: *samvedana se srijansheelta, kho kho model of innovation ( innovation relay )*
  - c) Going beyond **long tail, long nose** of innovations to **turbulent** innovations

# Models of innovations:


d) **Inverted** model of innovations: children invent, engineers fabricate, and companies commercialize

e) **Pooling of distributed** ideas for innovation and experimentation : uncommon from common

f) distributed mind management:

[www.techpedia.in](http://www.techpedia.in), **transcending the limits of frugality**

g) **Moving blackboards**: learning from unexpected quarters



Should *accuracy* be  
traded off with  
*affordability*

Should *design*  
overtake *durability*

Should *desires* be  
preferred over  
*deserving*

Trade offs in  
inclusive  
development

# Learning platforms:

from concrete to abstract

- 1. Artefactual - as a replication of solution level
- 2. Analogically - metaphor to inspire
- 3. Heuristically - as a model or principle
- 4. gestalt - configurational level

- Gupta, 2012, Own compilation

Changing the context changes  
the content



# Making strategic Breakthroughs

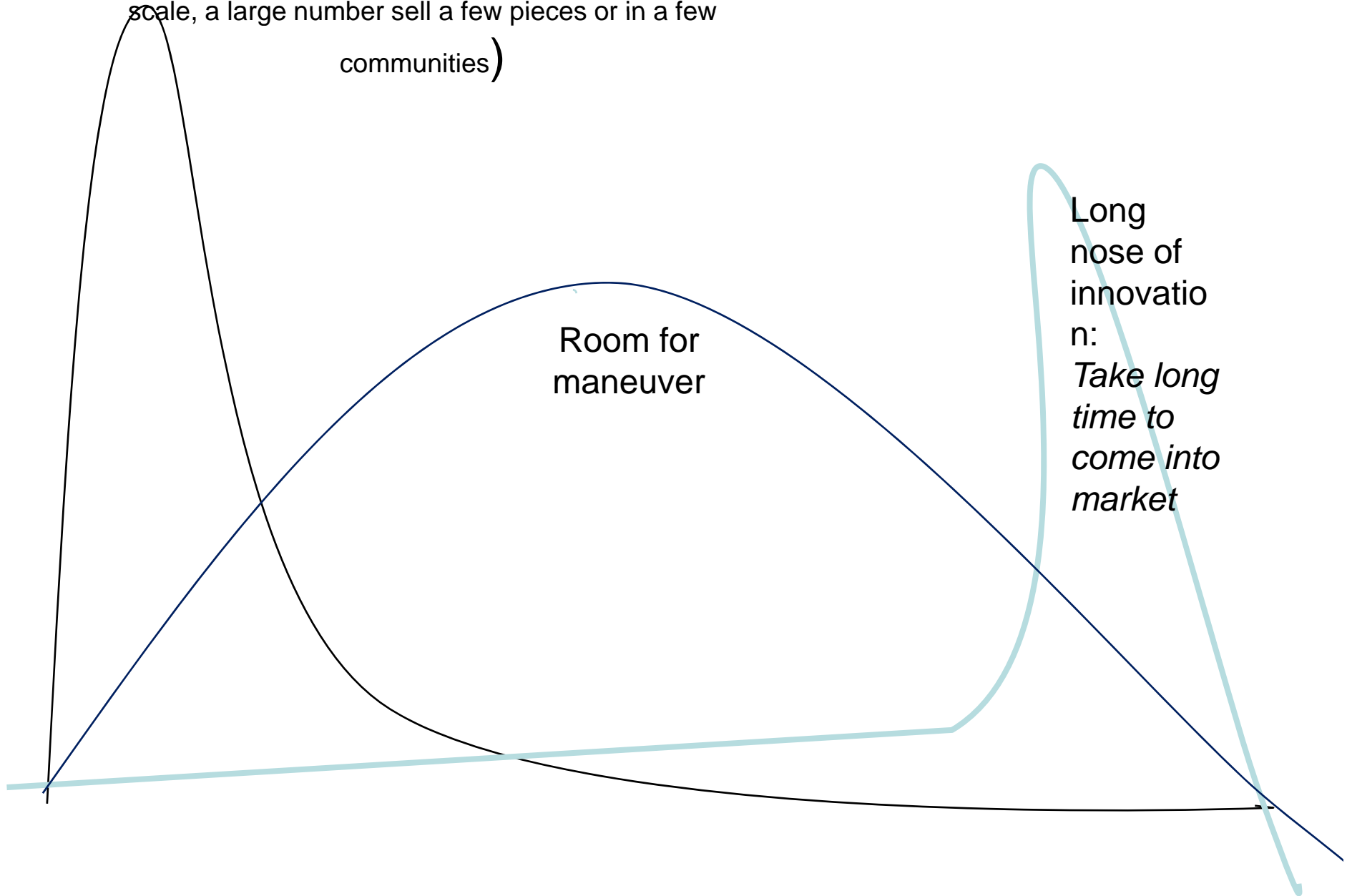
## Domain characteristics

Technological platforms

	Known	Unknown
Known	incremental innovations, adaptive trials, user-led modifications. , <b>incubation</b>	R & D with external experts, new actors and new arrangements
Unknown	Product Development, amplify the <b>form, features and functions</b>	<b>Paradigmatic</b> disruption, discontinuity and non-parameteric approaches sanctuary

# Long tail of innovation

( only a few achieve scale, a large number sell a few pieces or in a few communities )



Room for maneuver

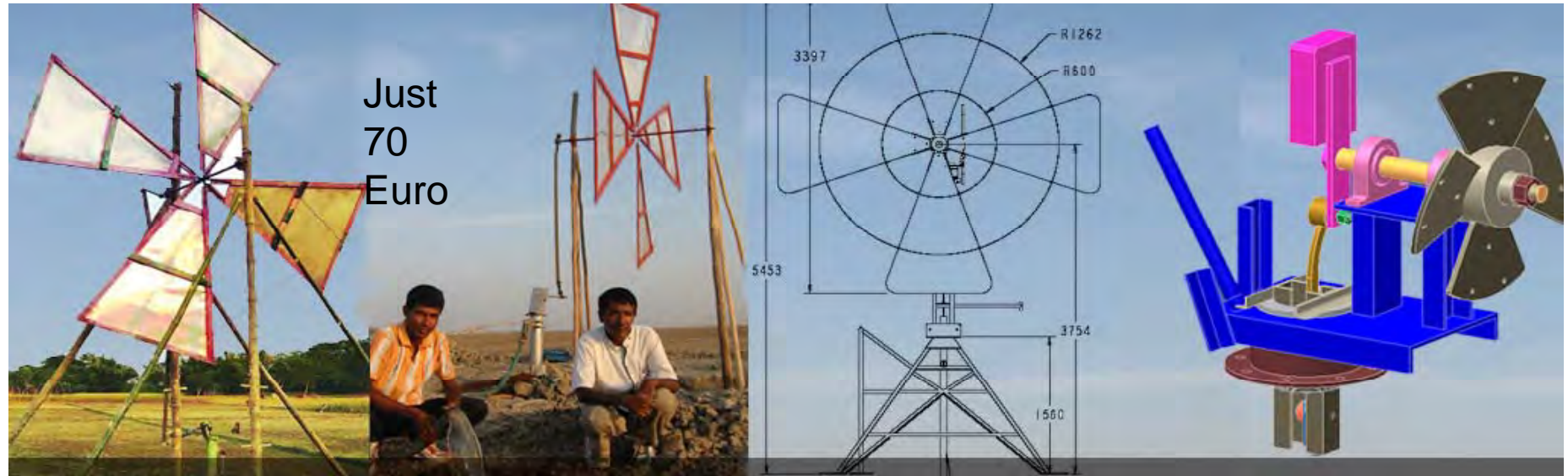
Long nose of innovation:  
*Take long time to come into market*

Learning from common people



Energy: Do we harvest efficiently?





Stronger, durable version,  
900 euro, saves diesel  
worth 700 euro in one  
season of salt making

**Innovation by Mehtar Husain and his brother Mushtaq Ahmed from Assam to Gujarat**

**Several African countries have shown interest to get this technology**



Solutions for the poor and the rich, by the poor: but this is not Juggad.



Non stick clay pan: Rs 60 /= Mansukh Bhai Prajapati, Surendra Nagar, Gujarat

## *Mansukhbhai : Mitticool Product Range*



# Pod borer

0 1 2 3 4 5 6 7 8 9 10

0 1 2 3 4 5 6 7 8 9 10





## Herbal Neem stabilizer



Kanubharti Mojibharti Bavaji, Junagadh,  
Gujarat

Validation: Institute of Himalayan  
Bioresource Technology, Palampur

## **Insecticidal activities of one of the grassroots practices (a combination of five ingredients) were tested in different ratio against Lepidopterons**

- Practice was found to be effective against *Helicoverpa armigera* larvae and exhibited Insect Growth Regulator (IGR) like activities.
- In all the combination tested, larvae failed to reach pupation stage and many died during larval stages. Similar activities were recorded in *Spodoptera litura*, however some of the larvae reached to pupation but failed to hatch into adults
- In dose response assay activity was retained up to 2%.

Validation: Institute of Himalayan Bioresource Technology, Palampur

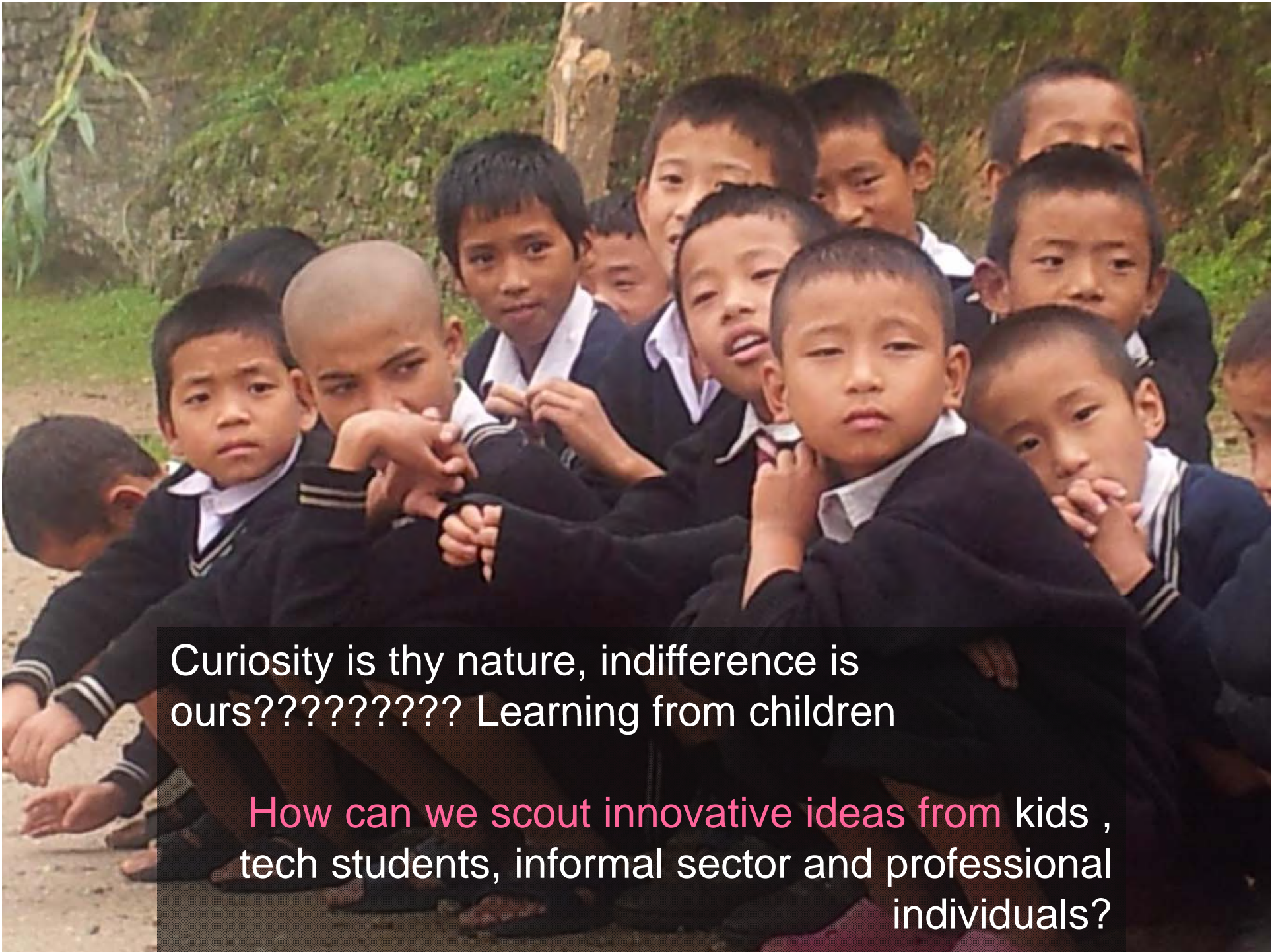


**Spodoptera litura (Fab)**  
**Tobacco caterpillar**



**Plutella xylostella**

Diamond back moth



Curiosity is thy nature, indifference is ours????????? Learning from children

How can we scout innovative ideas from kids , tech students, informal sector and professional individuals?

Nisha Chaube  
NOIDA  
Bag with folding seat



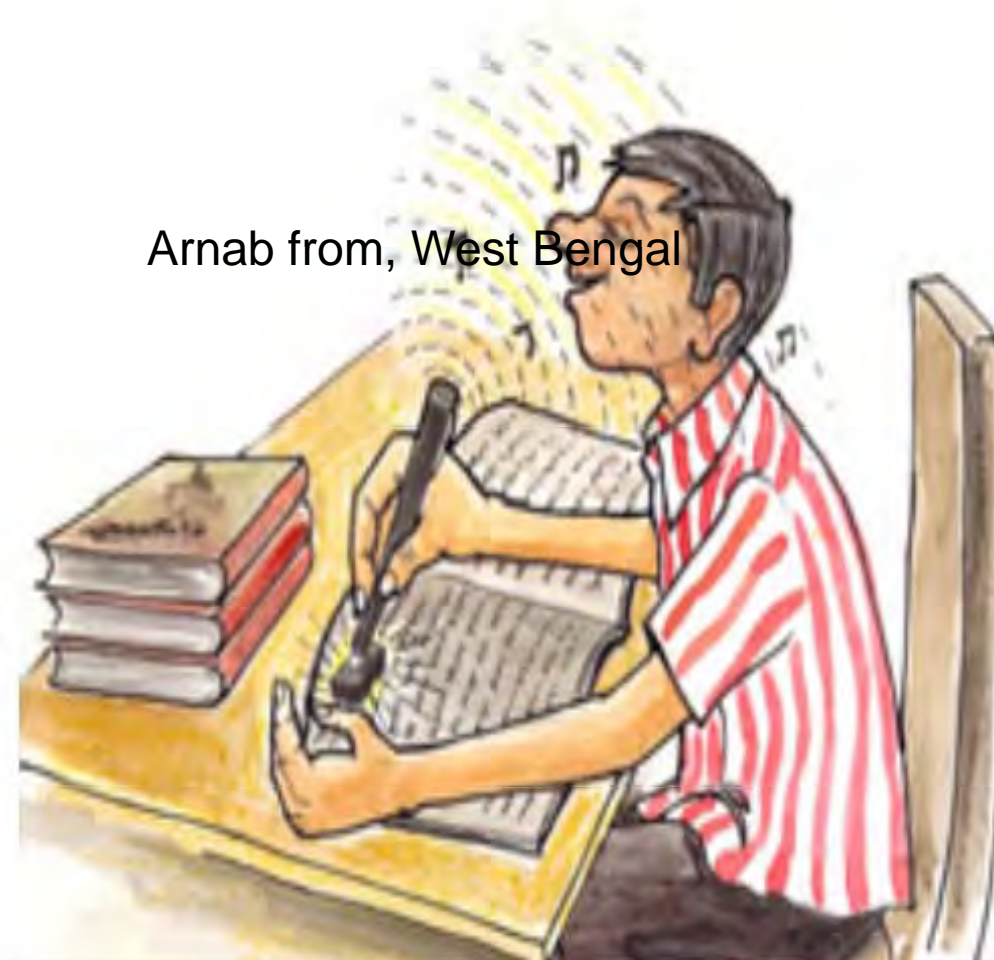
## Reading assistant for the blind/low vision people

Mayank's idea is to develop a gadget that can be worn on a hand and which can be moved over text or braille. It uses sensors that scan text and braille and convert it into audio signals for the blind /visually challenged.



**Mayank Walia**

Class 12  
Police DAV School  
Jalandhar, Punjab

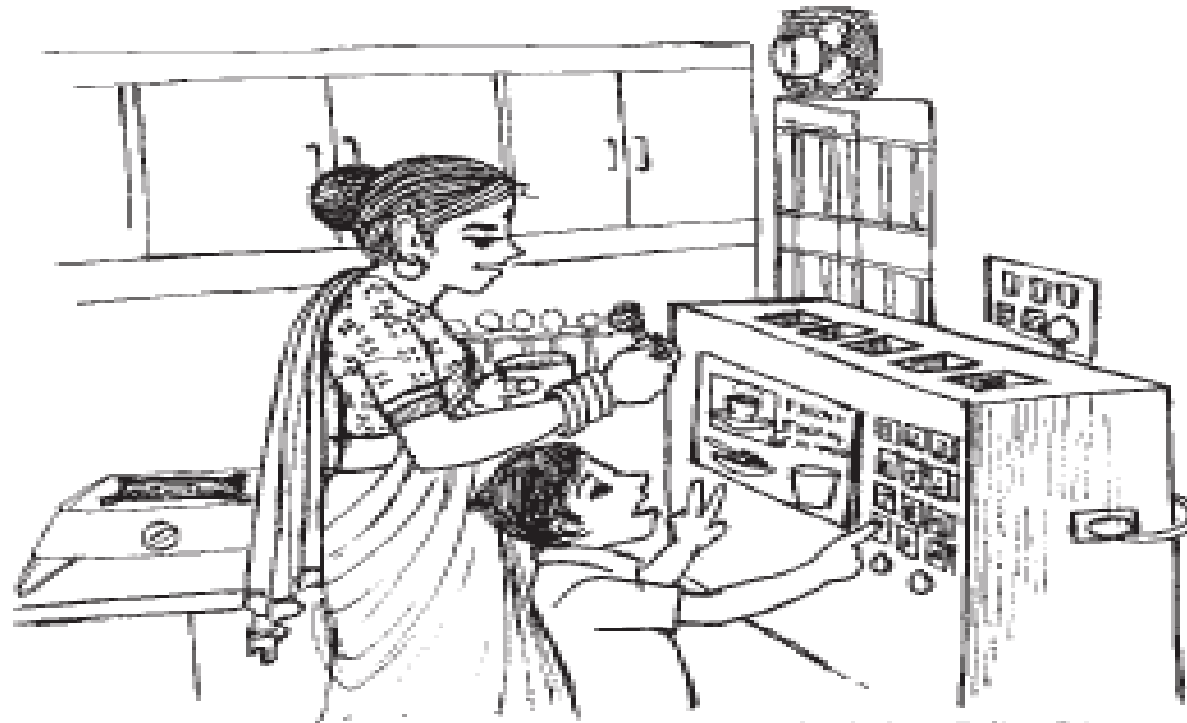


Arnab from, West Bengal

## Kitchen King- automatic food making machine Master

Abhishek Bhagat, class tenth, Bhagalpur, Bihar

This is a tested gadget with 12 boxes in it and a display screen from which one can select options



to cook different items. Then, the screen displays the required quantity of each ingredient. Once the items are fed into the machine, it cooks the dishes.

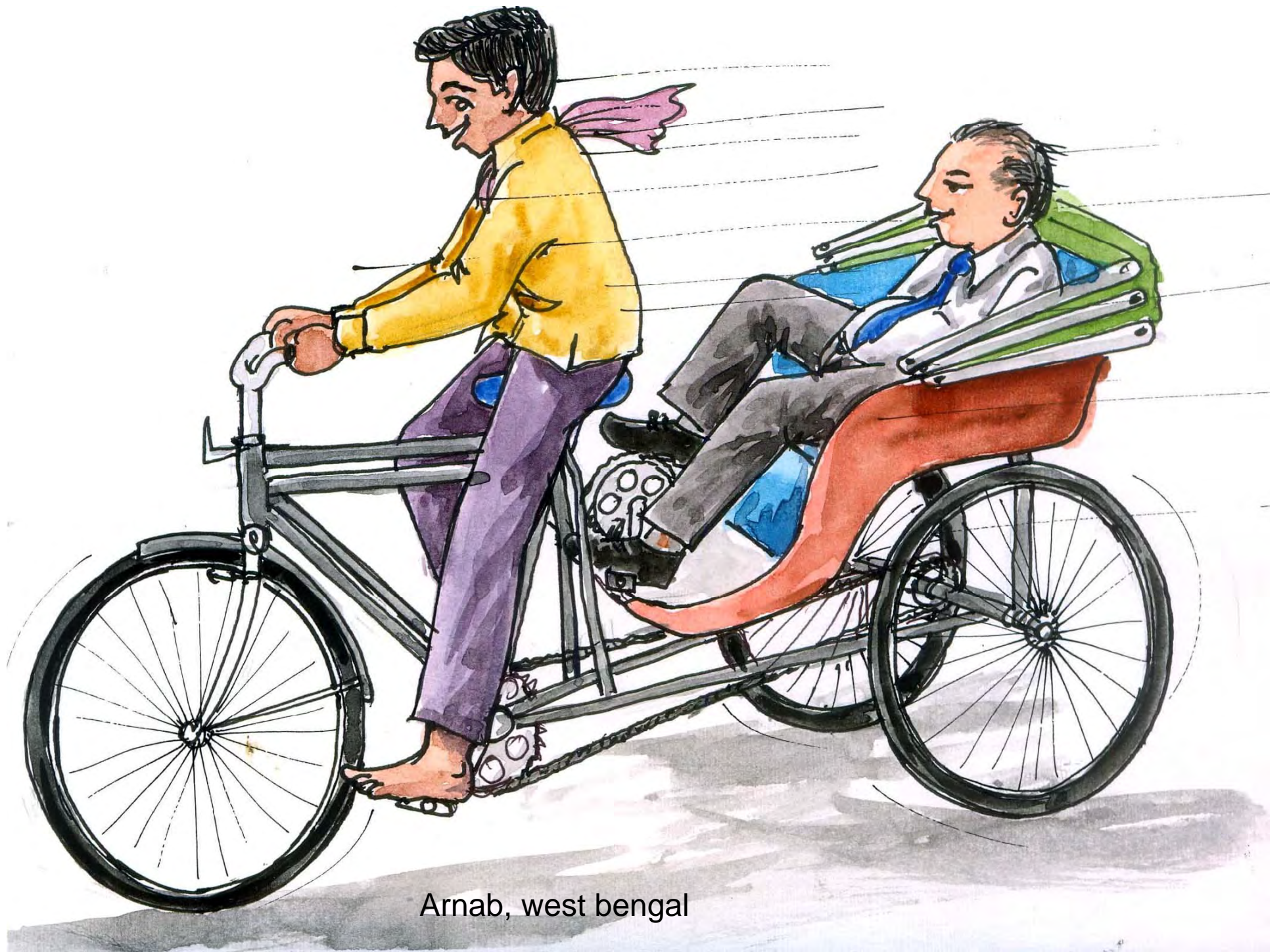


# Show freshener from china

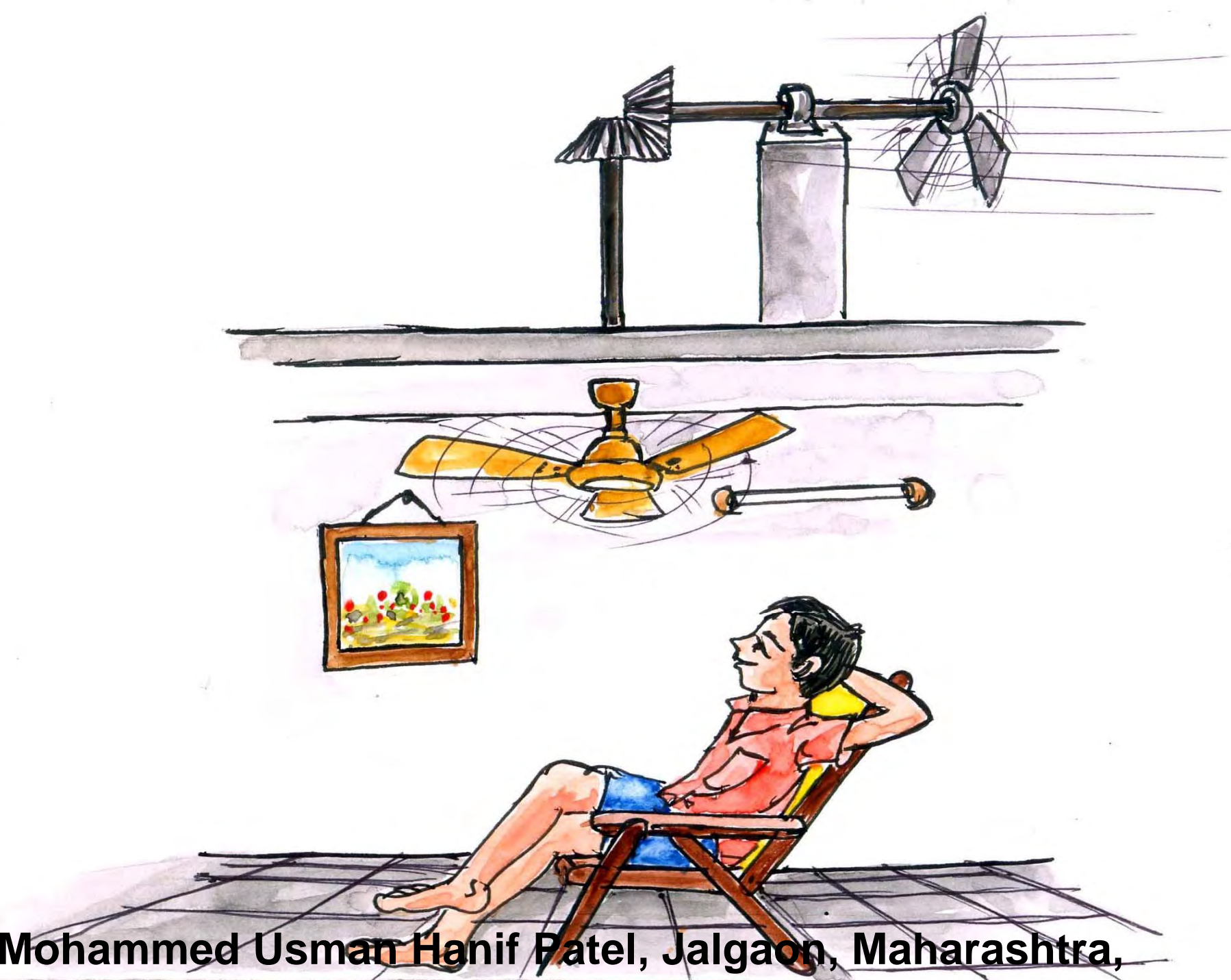
## *Wei zhi chuan, class tenth*

- Wei started playing ping pong at the age of six
- After lot of practice in the day, his shoes became wet due to sweat and left an uncomfortable feeling
- He thought of inventing “bactericidal shoe hanging machine”
- When the shoes are put on the hooks in the shoe hanging machine, the ultra violet rays and hot air start freshening the shoe and the dampness as well as the odour is removed. The shoes become fresh.





Arnab, west bengal



**Mohammed Usman Hanif Patel, Jalgaon, Maharashtra,**

# Multi-purpose Processing Machine

Innovator: Shri Dharamveer, Yamuna Nagar, Haryana

- The machine is capable of processing various herbs like juice and gel of *aloe vera*, juice of *amla*, *jamun*, mango, tomato, orange, etc.
- The cylindrical vessel is surrounded by jacket of castor oil for uniform distribution of heat.
- Motor speed: 1440 rpm; Rotor/centrifuge speed: 360 rpm
- Two variants of capacity 50 kg/h and 150 kg/h
- Electricity consumption : 1-1.5 units/hour
- Weight of machine: 60 kg and 125 kg
- NIF engaged a design firm to improve aesthetics, functionality, safety and hygiene.



# Typhoid Fever

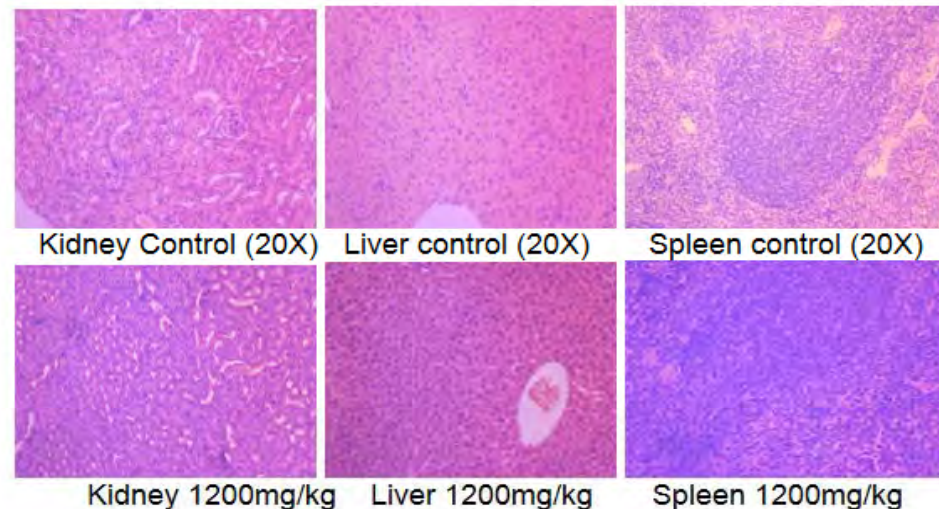
- Typhoid is one of the most common worldwide bacterial diseases transmitted by ingestion of food and water, contaminated with *Salmonella typhi*. Poor sanitation conditions promote the occurrence and re-occurrence of typhoid
- Symptoms of typhoid includes frequent fever and gastric problems.
- Typhoid fever persist for three weeks to a month, which may be fatal if not treated.
- Treatment of typhoid includes various chemical drugs such as ampicillin, chloramphenicol, amoxicillin, ciprofloxacin etc
- Resistance of causal organism towards these commonly used drugs is one of the major concern worldwide. Typhoid resistance to these drugs are known as Multi Drug Resistant Typhoid (MDR-Typhoid)



## Herbal Formulation for Typhoid:

• Extract and fractions obtained from *Shorea robusta* was evaluated against causal organism of typhoid and all of them showed good control in *in vitro* conditions.

• Toxicity of the above was also tested in *in vivo* conditions in Swiss albino mice at different dose and it was found non-toxic even at the oral dose of 1200mg/kg.



## Evaluation of Plant extracts for their anti-cancer properties”

Effect of Compound 1 (Bur) on Cell Viability using Skin Cancer (B16F10 LucG5) Cells

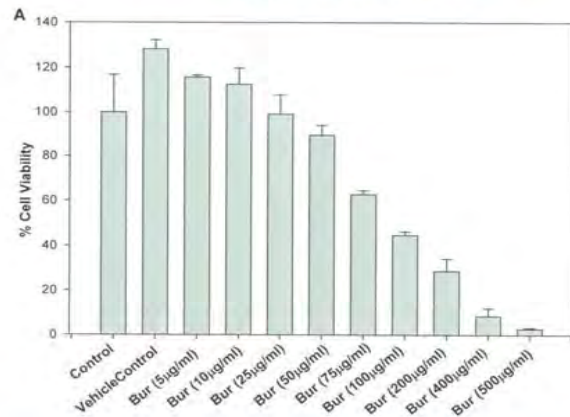


Fig 1A :- MTT cell viability assay upon Bur treatment: Mouse melanoma B16F10 LucG5 cells were treated with increasing concentration of Bur for 16 h. Cells were incubated with MTT for 4 h and absorbance were measured at 570 nm using an ELISA reader. Mean percent cell viability (standard error of mean) is plotted as a function of Bur concentration in µg/ml.

Effect of Compound 2 (Cayratia) on Cell Viability using Skin Cancer (B16F10 LucG5) Cells

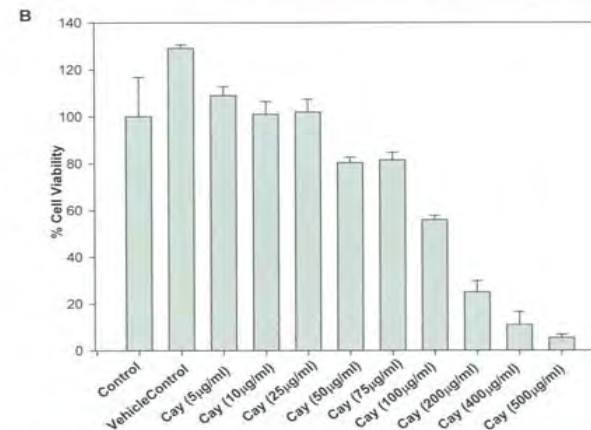
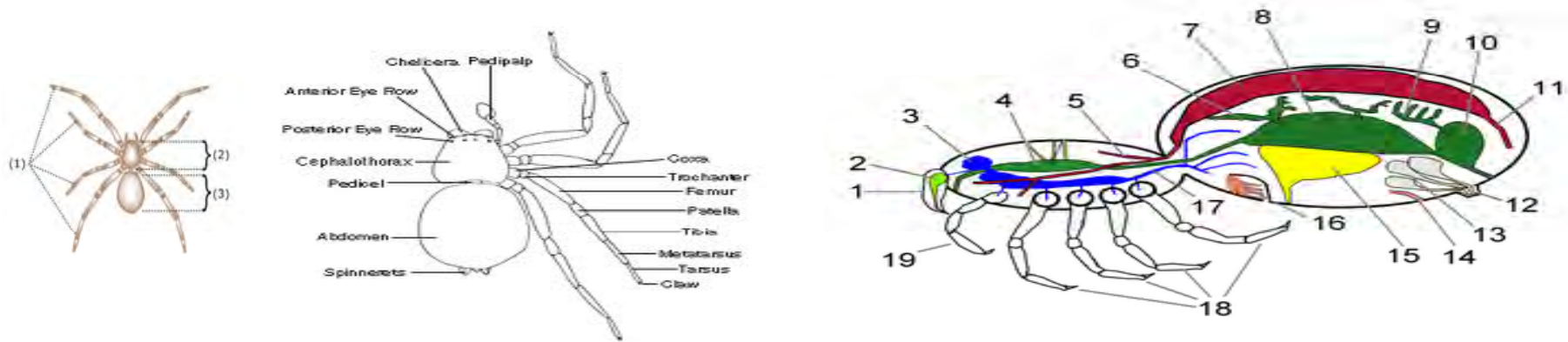


Fig 1B :- MTT cell viability assay upon Cayratia treatment: Mouse melanoma B16F10 LucG5 cells were treated with increasing concentration of Cayratia for 16 h. Cells were incubated with MTT for 4 h and absorbance were measured at 570 nm using an ELISA reader. Mean percent cell viability (standard error of mean) is plotted as a function of Cayratia concentration in µg/ml.

- The plants extract evaluated for its efficacy against Skin cancer cell lines (B16F10 - LucG5) showed significant reduction in the % cell viability.
- The growth of cancer cells were reduced when they were treated with extracts.
- A dose dependent relationship was observed, higher the concentration of the extract higher was the reduction in the cell proliferation.
- The herbal extract is very effective against the cancer cell lines.

# “Spider Protein Formulation for Blood Clotting”

## Silk (Protein) Producing Structure of Spider



**Spinneret** one of the specialized silk-handling devices found in spiders. 4 pairs (2 on 10<sup>th</sup> segment and 2 on 11<sup>th</sup> abdominal segment)



Spinnerets are movable, sclerotized tubes composed of several segments; they vary in size, and are mostly conical in web-spinning species. The silk glands produce a protein (fibroin) as a liquid which is emitted through tiny spigots on the ends and ventral sides of the spinnerets.



What can we learn from the Frugality of people living on the margins?

It takes very little to be happy





traditions of excellence  
panchmahals  
,Gujarat

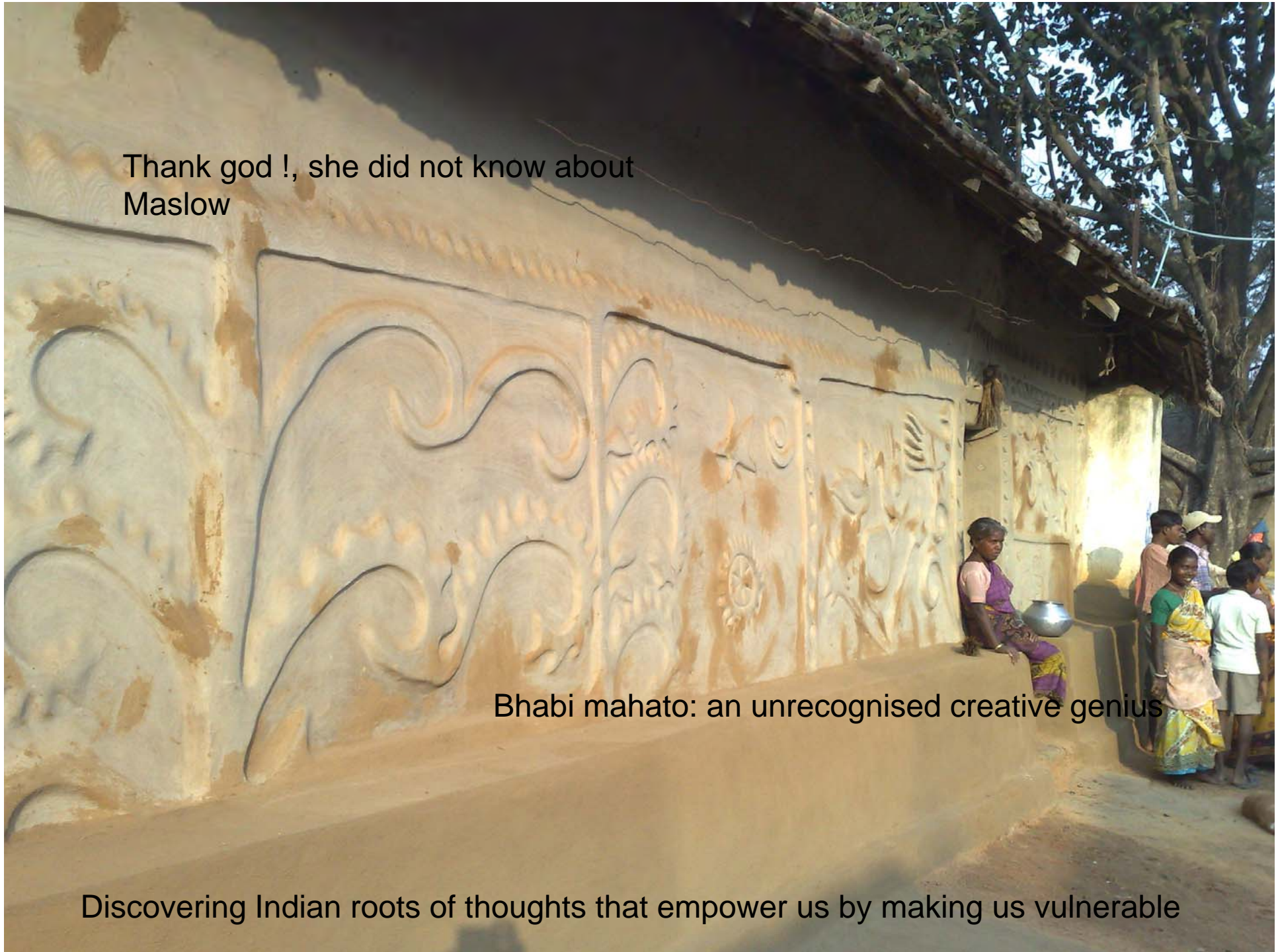
Is this a skilled job? How can then she be unskilled?



Thank god !, she did not know about  
Maslow

Bhabi mahato: an unrecognised creative genius

Discovering Indian roots of thoughts that empower us by making us vulnerable



No surface is too scarce, no place more perfect for the expression of creative spirit even on dung cakes heap




A photograph of a small, single-story house with a red exterior and blue trim around the windows and roofline. The house is situated in a lush, tropical environment with dense green foliage, including large trees and banana plants. A utility pole stands near the house. The scene is framed by a semi-transparent pink rectangular box containing white text.

Maslow's  
Hierarchy of Needs?

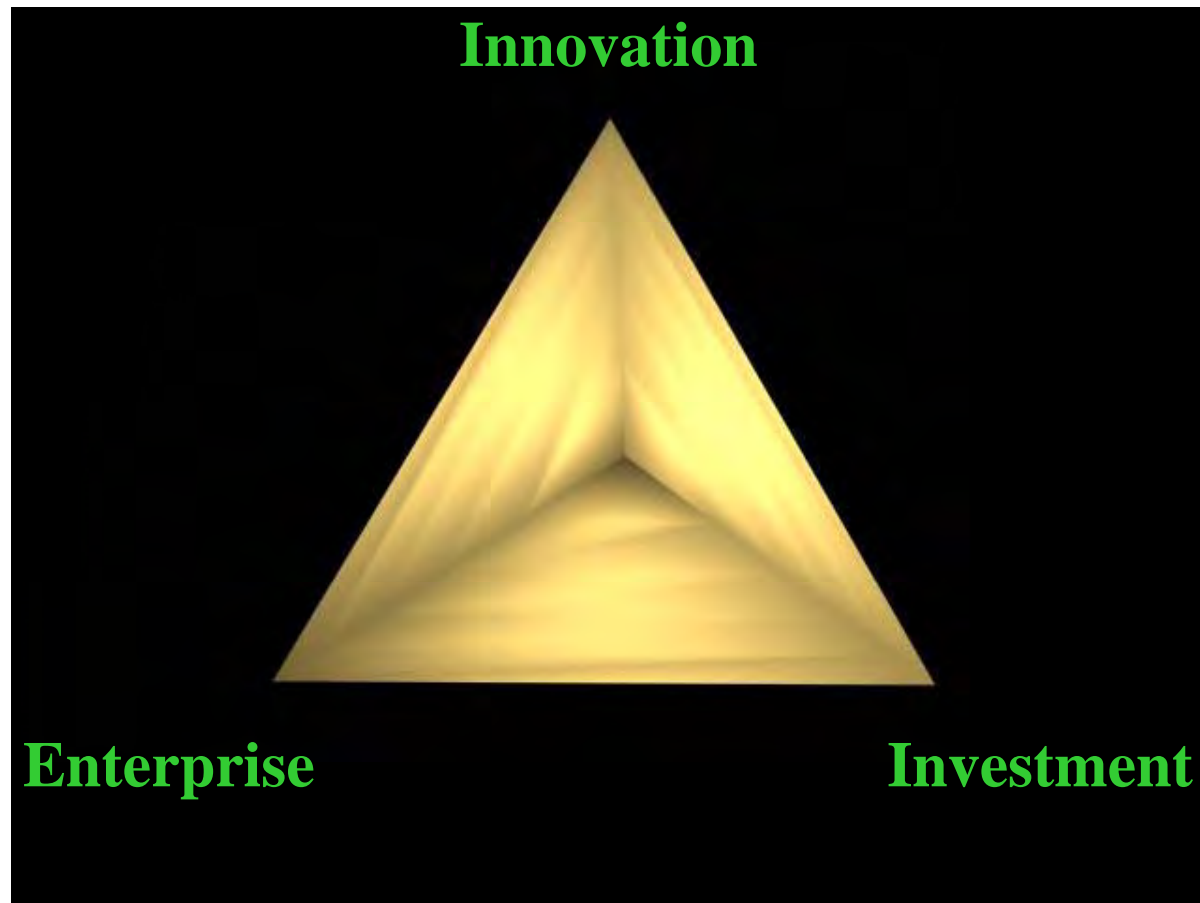
A photograph of a traditional wooden house with a thatched roof made of dark, weathered wooden shingles. The walls are made of light-colored mud or plaster. A window box filled with various colorful flowers, including pink, red, and white blooms, is mounted on the wall. The house is surrounded by lush green foliage, including large leaves and bamboo-like plants. A wooden pole runs across the roof. The overall scene is set in a rural, natural environment.

Maslow's Hierarchy of Needs?

A photograph of a muddy path with a large green leaf in the foreground and a text overlay. The path is dark brown and wet, with several leaves scattered on it. A large, vibrant green leaf with prominent veins is the central focus in the lower half of the image. To its left, there is a smaller, brownish leaf. In the upper right, another large green leaf is partially visible. The background shows more of the muddy path and some green vegetation on the sides. A semi-transparent green box with white text is overlaid on the right side of the image.

Shall we take notice of  
innovation only when it falls  
out of place?

# GOLDEN TRIANGLE OF CREATIVITY





# Mind to market: the case of herbavate



# Herbvate: a skin ointment

- It is based on the knowledge of seven innovators from six districts Sabarkanth, Panchmahal, Dang, Mahsana, Patan and Bhavnagar of Gujarat. Herbavate exhibits remarkable properties against eczema and variety of inflammatory and infectious skin conditions.

**Communities:** The innovators of Herbavate: 1. Amratbhai Shankarbhai Rawal, Mehsana Gujarat. 2. Kunjubhai Kakadiyabhai Bhoya, Dang Gujarat 3. Pujabhai Dabhi, Sabarkantha, Gujarat 4. Karshanbhai Parmar, Sabarkantha Gujarat 5. Laxmanbhai Pagi, Panchmahal, Gujarat 6. Lilabhai Rawal, Patan Gujarat 7. Lakhabhai Becharbhai Khatana, Bhavnagar Gujarat



**HERBAVATE**



**Herbal medicine for  
patients suffering with  
dermatitis and psoriasis**



g2G

grassroots to global

**Global GIAN – Building Global Value  
Chain for augmentation of Green  
Grassroots Innovations**



# Sales made

1. Coconut tree climber- USA (Florida, Massachussets, California, Hawaii etc.) Australia, Maldives, Sri Lanka, Brazil, Mexico, West Indies
2. Pomegranate deseeder-Turkey, USA
3. Garlic peeling machine-Pakistan
4. Arecanut husker- Singapore
5. Milking machine-Phillipines, **Uganda, Ethiopia**
6. Resin grading machine-Peru
7. Cassava peeling machine-**kenya**
8. Herbal growth promoters-Ghana

<b>Product enquiries:</b>		
<b>Sl no.</b>	<b>Innovation/product</b>	<b>Countires</b>
1	Coconut/palm tree climbing device	USA, United Kingdom, Vietnam, Australia, Sri Lanka, Mexico, Iran, West Indies
2	Entech oil expeller	USA, United Kingdom, Australia, Phillipines, Canada, Kenya, Colombia, S. Africa, Switzerland, Poland, Indonesia, Belgium
3	Garlic peeling machine	Slovenia, USA, Turkey, Peru, Singapore, Iran , Venezuela, Pakistan
4	Pomegranate deseeding machine	USA, Australia, Turkey, Venezuela, Hongkong, Israel, Netherlands, Thailand, UAE, Iran, United Kingdom
5	Cassava peeling machine	Congo, USA, Benin, Nigeria, Kenya, UAE, Uganda
6	Aaruni tilting cart	Uganda
7	Coconut defibring machine	China
8	Coconut dehusker	Mexico, New Zealand, USA, Philippines, Bangladesh
9	Lemon cutting machine	S. Africa
10	Milking machine	Bangladesh, Uganda, Ecuador
11	Palm leaf mat weaving machine	Fiji
12	Rain Gun (Chandraprabha)	Sudan
13	Tea making machine	Bangladesh,
14	Tile making machine	Bangladesh, Kenya, Rwanda, Ghana, Zambia
15	Trench digging machine	Pakistan
16	Zero head water turbine	Egypt
17	Arecanut dehusking machine	Chile

# Amphibious Car

## The Chinese innovation by Hu Ze En



## The Indian Innovation by P.S.Vinod, Kerala



# Bicycle Hoe

**Lao Yang, Shan dong province**



**Zhang Xingming, Shaanxi Province**



**Wang Fuhe  
Miyun County, Beijing**

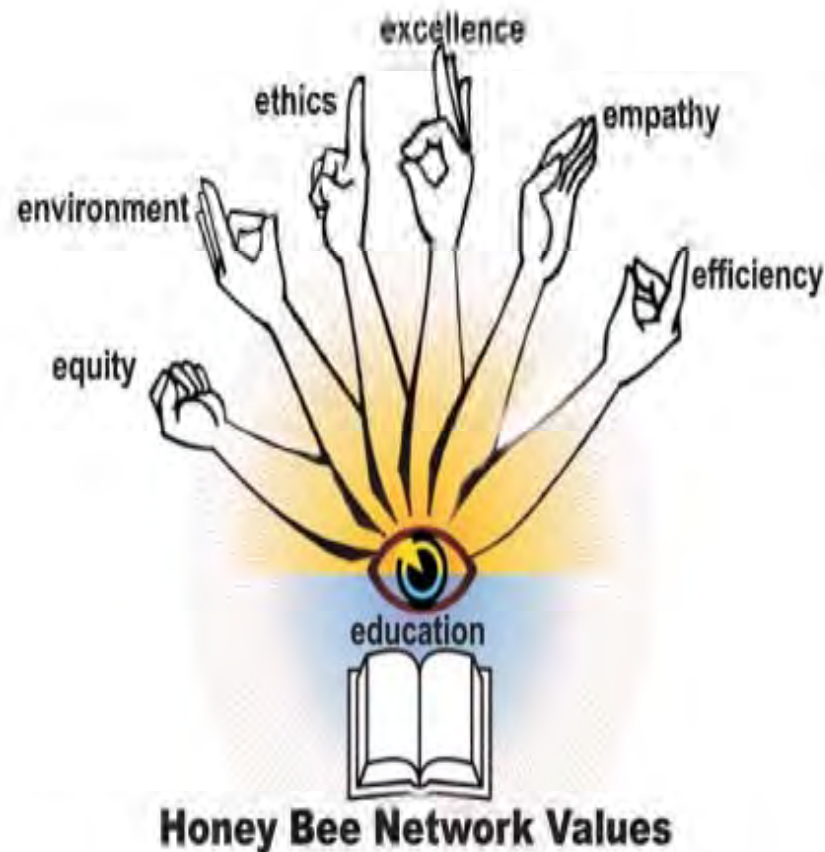


**Gopal Malhari Bhise, Ahmednagar, Maharashtra**





## Values and basic principles of HBN



Cross pollination through  
Knowledge Sharing in local  
language

Recognition, Respect &  
Reward, reinforcing  
identity of creative people

Fair and just Benefit  
Sharing

# Dynamics of small town, small institutions, sub cultures

Lessons from [www.techpedia.in](http://www.techpedia.in) by sristi.org

**Innovations will emerge from big minds  
in small places, young people, even  
less trained ones**

# www.techpedia.in

- recently a new initiative [techpedia.in](http://techpedia.in), (a portal by SRISTI ( sristi.org) pooling 104,000 engineering projects by 350k students from over 500 institutions) etc., engaging with youth in the one of the youngest country

- 



# Shanu sharma: vardan, iitk



# **Image, Speech Recognition and Speech Synthesis for deaf and dumb to talk to normal people**



**Saurabh Saket and Rahul Ranjan , Bhutta College of Engineering & Technology, Ludhiana**

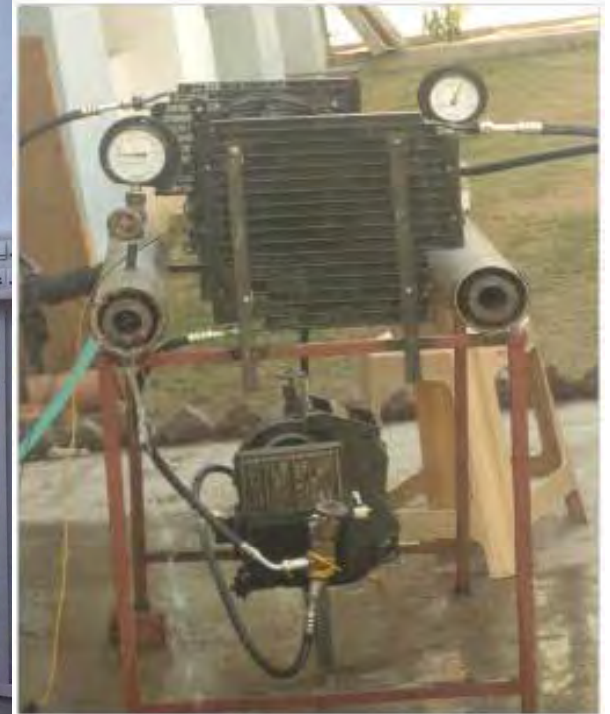
Has any big company given you fridge that also gives you hot water, keeps food warm and consumes less electricity



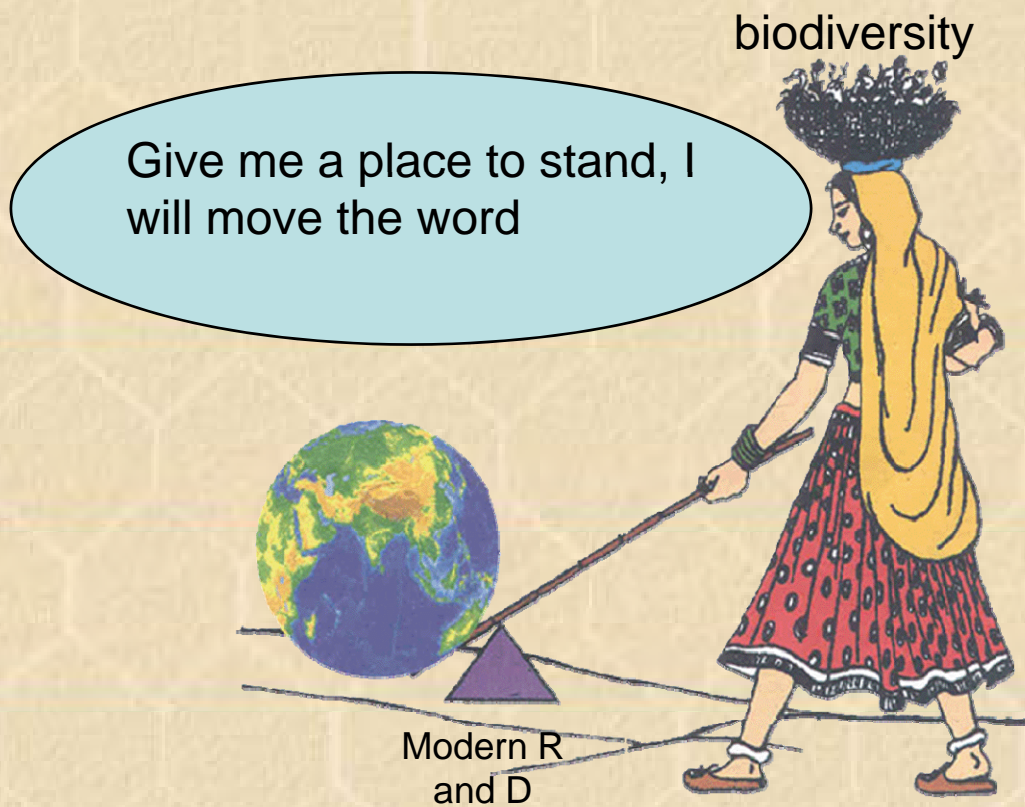
Lpg gas based refrigerator  
Chintan, mayank, biren Mehsana



Hot water from fridge  
Dhruv Mehsana



Exhaust pipe  
cools drivers  
cabin



**SRISTI** (*Society for Research and Initiatives for Sustainable Technologies and Institutions, 1993*) is a developmental voluntary organization, set up to strengthen the Honey Bee Network of grassroots innovators engaged in conserving biodiversity and developing sustainable solutions to local problems.



# Shodh yatra

every summer, every winter







# SHODHYATRA in salty arid plains MAY 2009

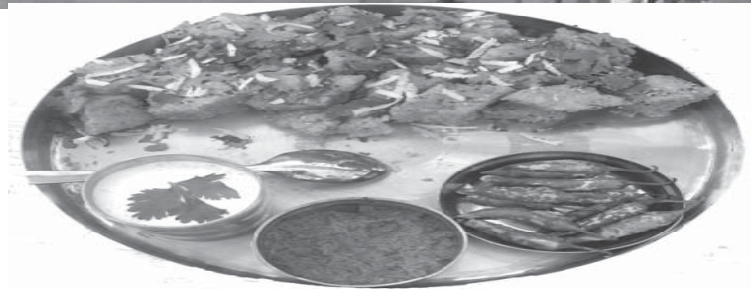


# Blending formal and informal science and technology

- Can people's knowledge push the frontiers of science and technology?

# Satvik

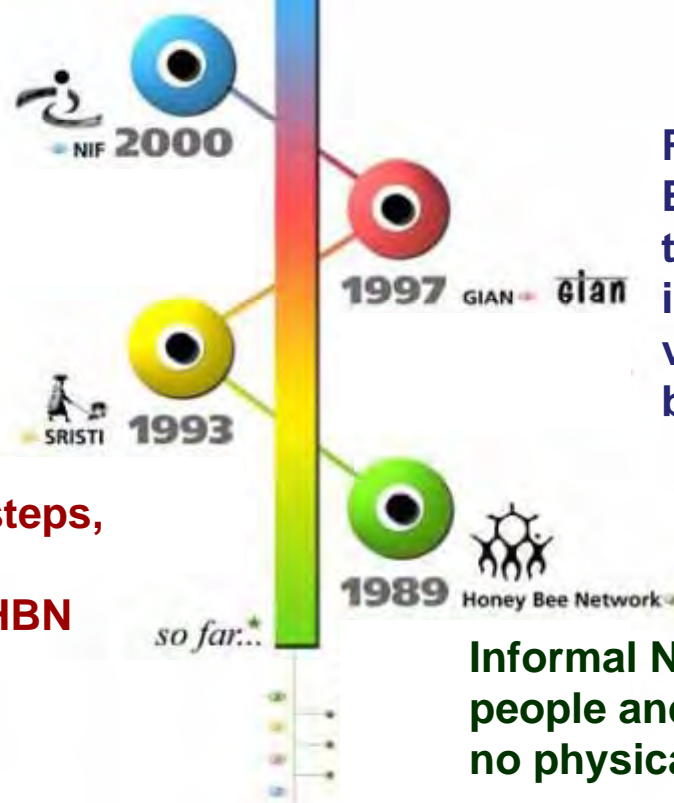
Traditional Food Festival, iim campus



# Honey Bee Network- an Incubator of Institutions

National level body supported by DST. Govt of India to scale up green grassroots innovations

First formal steps, an NGO to support the HBN



Regional Technology Business Incubators to augment grassroots innovation through value addition & business development

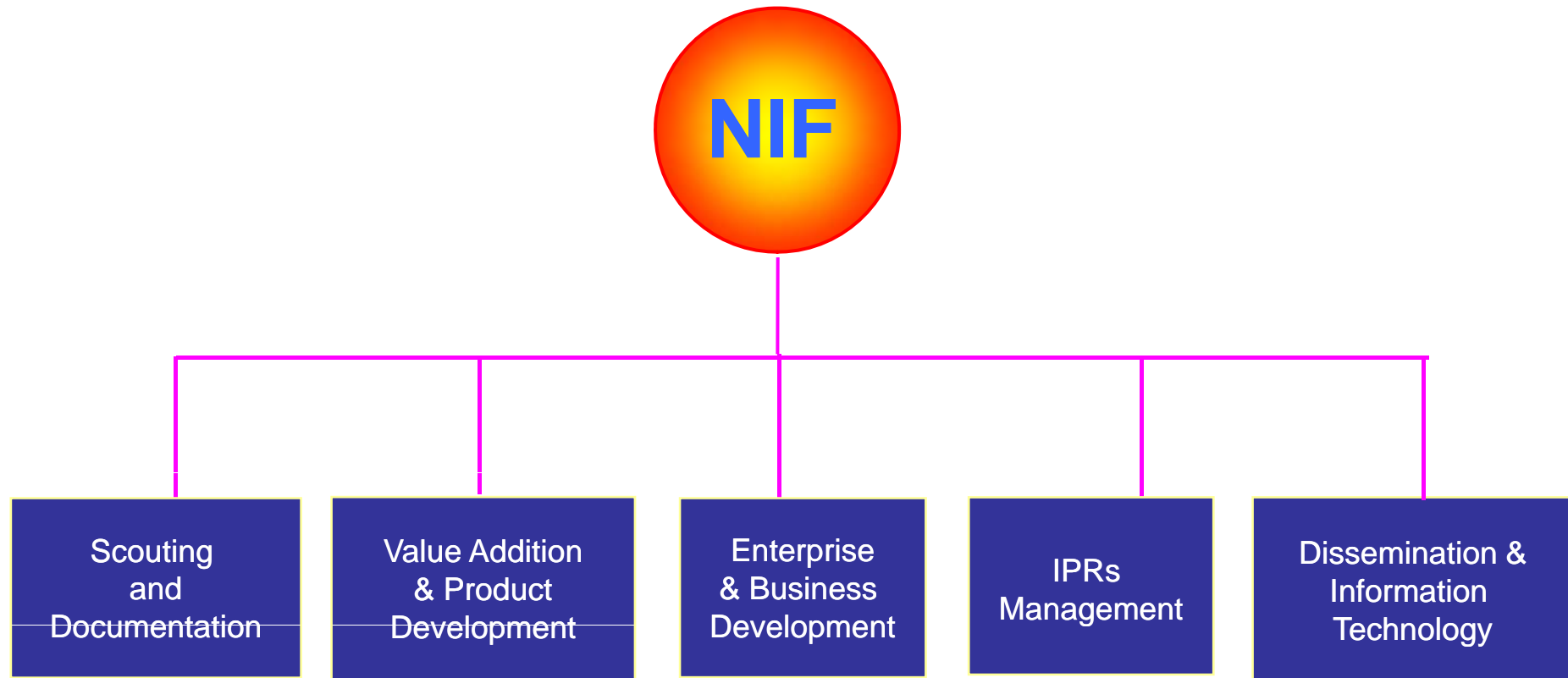
Informal Network of like minded people and organizations. It has no physical address

# Mining the minds of masses

- NIF has mobilized more than 160,000 ideas, innovation, and traditional knowledge practices, of course not all unique, from over 500 districts of India. Patents have been filed for more than 450 grassroots innovations and outstanding tk practices in India and USA; much more are in public domain



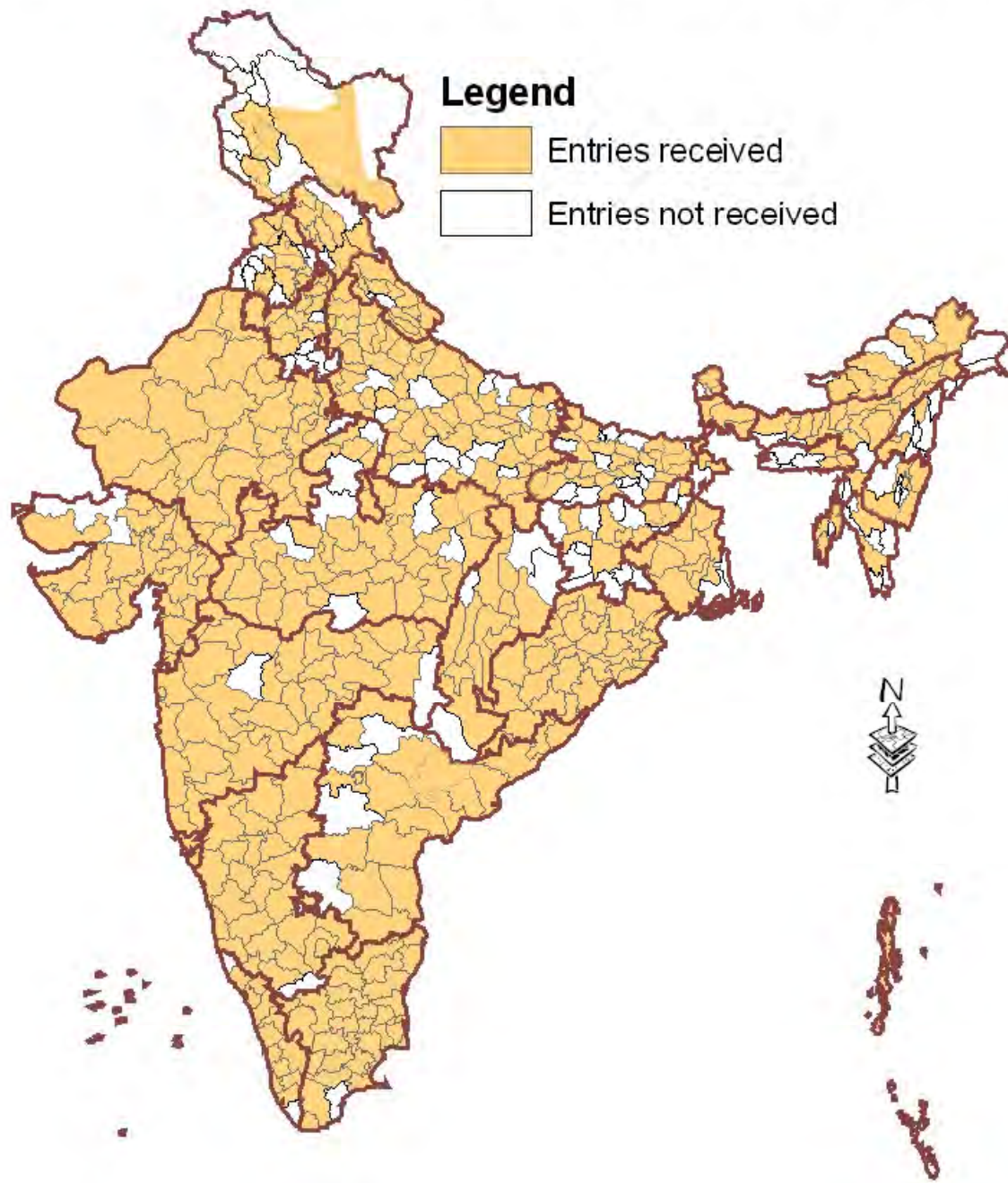
# Functions



# Current Status

- Scouted more than 160,000, ideas, innovations, traditional knowledge practices (Not all unique)
- 500+ patents filed on behalf of innovators
- 500 projects supported for value addition
- 174 projects under Micro venture innovation fund
- Transferred 64 technologies to 78 licensees

# Coverage of Districts by NIF (2000-2010) N= 545







**Polycentric Learning from multiple sources,  
levels, and channels:**

Future sources of learning,  
creativity and innovation would  
**not be restricted** to formal  
boundaries of organisations.



**Children's Creativity and Innovation Day  
October 15**

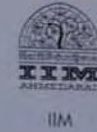


National Innovation Foundation  
पाँचवाँ राष्ट्रीय तृणमूल नवप्रवर्तन  
एवं विशिष्ट पारंपरिक ज्ञान पुरस्कार समारोह  
5th National Grassroots Innovation and  
Outstanding Traditional Knowledge Award Function



नवंबर १८-१९, २००९

November 18-19, 2009



## Key lessons :

- a) Tk is not uniformly distributed, some times neighboring villages don't know, sometimes within a village people don't know
- b) There is a huge difference between those who know but can't practice vis a vis those who can do both

c) Without generating an ethical value chain, there is not much benefit that will be shared; both market driven and self use driven open source and protected tech domains need to be nurtured; patents are important but collegial learning is even more important. Acknowledgement of people's knowledge at all stages of value chain including on packages

## d) Moving towards Tech commons:

self employed people who work with their hands and are at near subsistence level need to be encouraged to copy and imitate the knowledge, but firms cannot usurp the people's tk and tk based innovations without licensing

Lead innovations and derivative innovations by a group of grassroots innovators and tk holders are kept in bundle. This bundle by common consent can be licensed to a firm but members of a community and other self employed people can copy and adapt it for their own survival

E) PIC needs to be taken at different stages, assuring too much before finding out novelty will raise expectations which may not be fulfilled, it will lead to frustration ( see [nifindia.org](http://nifindia.org)) .

F) Formal and informal science have to be blended before valuable IP can really be created. In any case credit may be given in ip in relevant cases to formal sector but assignment may still be done in the name of local communities

G: There is no fast track for applications based on TK at any level, national or international level


H: A clearing house mechanism may be created so that market opportunities may be generated for them



# What are the ways in which national governments can deal with this challenge?

- Identifying local champions who have a passion for building upon people's creativity and innovative potential as well as traditional knowledge without in any way taking an obscurantist view of formal institutional science and technology.
- Empowering such individuals through endowments similar to the one created by Government of India in the case of NIF set up by Department of Science and Technology (with a corpus of 5 million dollars).
- Trusting the Governing Board of such a Foundation to maintain national register of grassroots innovations and traditional knowledge, and build a value chain around such innovations.

- Creating a policy environment for protection of people's knowledge and also providing risk capital for adding value for developing products and commercializing technologies at varying terms for mass consumption.
- Developing a fund for supporting diffusion of open source public domain technologies governed by the Prior Informed Consent of the knowledge holders, communities as well as individuals.
- Incorporating lessons from the unaided innovations as well as traditional knowledge in the curriculum at school level to reinforce the spirit of conservation of biodiversity and associated knowledge systems with simultaneous inducements of healthy skepticisms and positive experimental ethic.



**Minds on the  
margin are  
not marginal  
minds:**

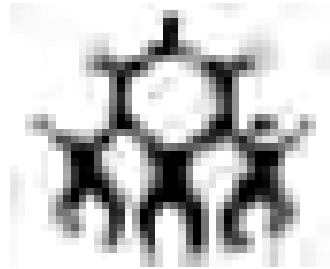
shall we join hands in **learning from grassroots green innovators**

Fortune really lies at the **Top** of **Innovation, ethical,**  
and value pyramid  
*Thus poor people are not at the bottom of all pyramids*



anil k gupta  
National Innovation Foundation, SRISTI, honey bee network, IIMA  
[www.sristi.org/anilg](http://www.sristi.org/anilg)  
[www.nifindia.org](http://www.nifindia.org)

## How did it happen:



Honey bee network , informal global social movement, started in 1987-88,



SOCIETY FOR RESEARCH AND INITIATIVES FOR SUSTAINABLE TECHNOLOGIES AND INSTITUTIONS  
([www.SRISTI.org](http://www.SRISTI.org) ) [info@sristi.org](mailto:info@sristi.org)




GRASSROOTS INNOVATION AUGMENTATION NETWORK ([wwwGIAN.org](http://wwwGIAN.org))



NATIONAL INNOVATION FOUNDATION  
([www.NIFindia.org](http://www.NIFindia.org)) [info@nifindia.org](mailto:info@nifindia.org)

## The journey.....

[Anilg@sristi.org](mailto:Anilg@sristi.org)



Creativity counts  
Knowledge matters  
Innovations transform

Incentives inspire

*( not just individual, but also collective, not just material, but also non-material)*

Join the Honey Bee Network!  
For rewarding indigenous creativity and innovation  
[www.techpedia.in](http://www.techpedia.in), [www.sristi.org](http://www.sristi.org), [www.nif.org.in](http://www.nif.org.in)  
[anilgb@gmail.com](mailto:anilgb@gmail.com)