



## Global Energy Collaborations

Always Collaborating to make  
Future Brighter and Economical

### Presents **BIOMASS STOVES** **WITH QUICK GLOW INNOVATIONS**

#### **“BIO GLO HEALTH BLESSING STOVES”**

*Renewable Energy Based Smokeless*

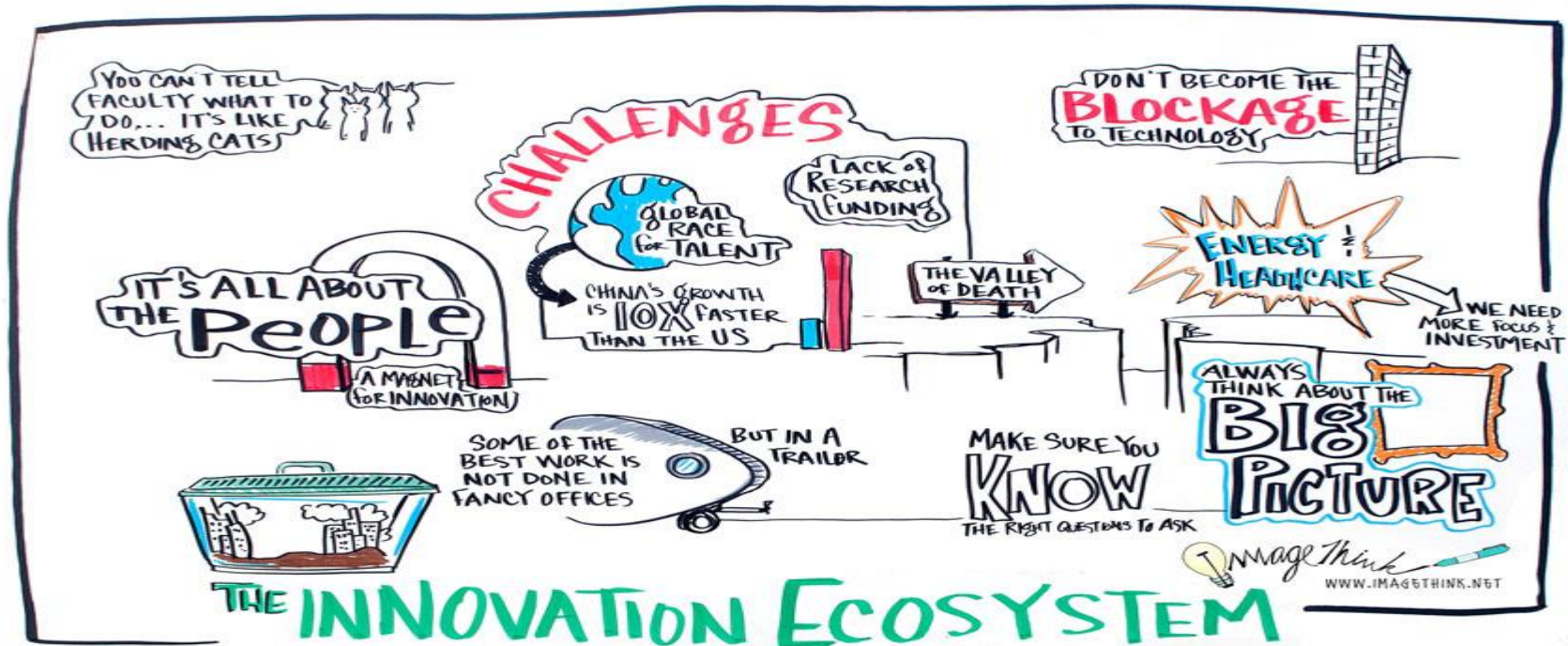
#### **“LIFE –SAVER” STOVES FOR DOMESTIC COOKING** **Efficient , Life & Money Saving Stoves!!!**

**Achieve Socio-Economic Goals of Global Importance!**

- \* ***Prevent Indoor Air Pollution & reduce harmful emissions***
- \* ***Contributes to Prevent 2 MILLION deaths every year by cookstove smoke & particulates***
- \* ***Victims mostly being Women and Children, who are home, when cooking takes place***
  - \* ***Reduce Global Warming; Empower Women to prevent gender disparity***
  - \* ***Protects children ; Replace fuel LPG with renewable energy fuels***
- \* ***Boost of LPG Savings for LOWER MIDDLE CLASS AND LOW-INCOME households!***
- \* ***Boost of Taste! And increase the value of Life for a Housewife , all through.***

# Consider SOCIO-ECO-HEALTH INITIATIVE TO TACKLE: The Basic Problems with Traditional Open Cookstoves causing Serious Health Hazards to half the population of the Planet

Through unique efforts and innovations like this Dr. V.J. Victor of our Team has come up with this Smokeless Biomass Pellet Stoves for Clean And “Green” Cooking, with substantial savings of LPG Gas and host of Other Socio Economic Benefits which directly benefits Women & Child



# **India has the dubious honor as the International Leader In Harmful Cook Stove Emissions!**

In rural India, most families use traditional methods of cooking: open fires, smoky flames, and solid fuels such as wood and cow dung.

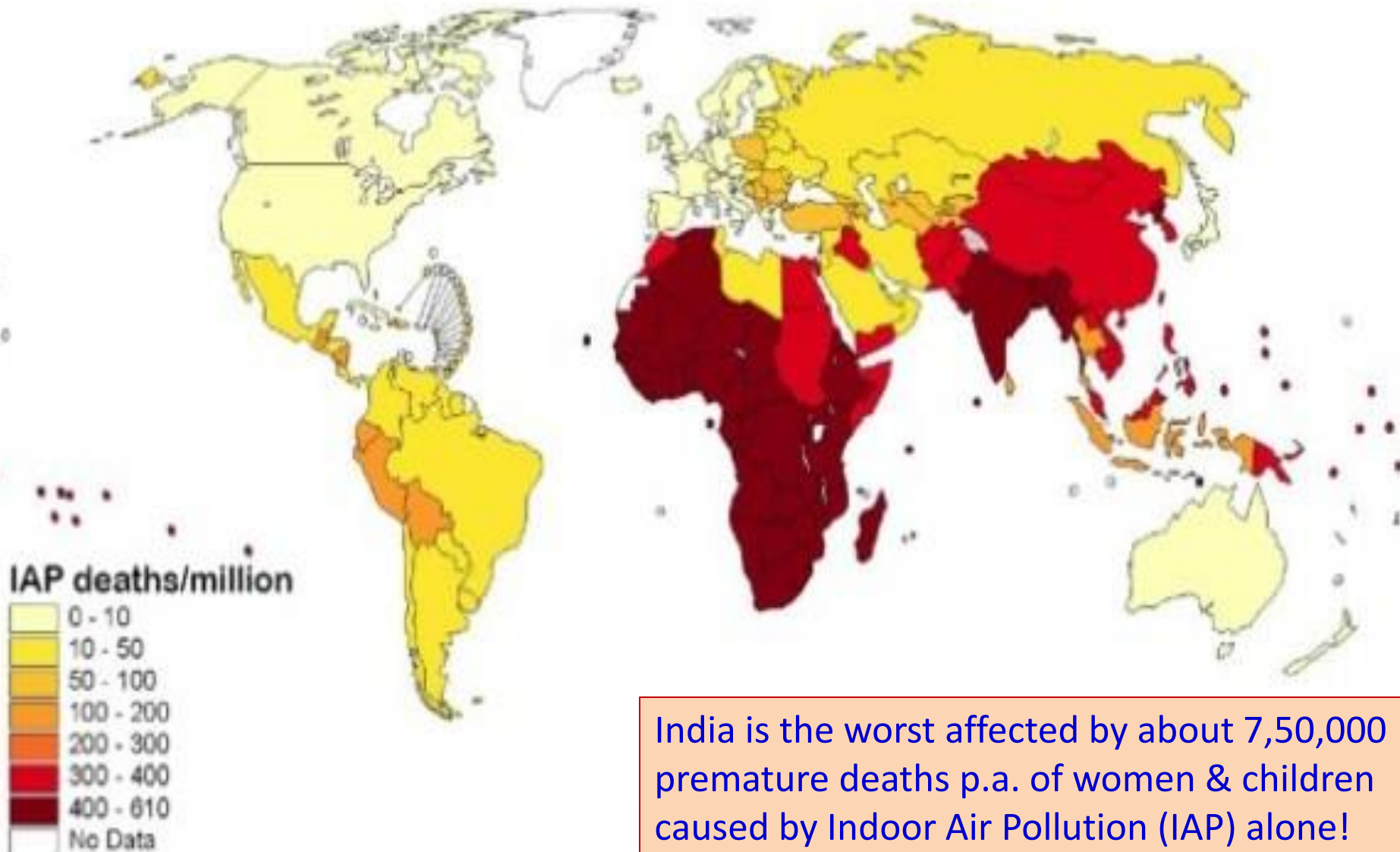
With no chimney to diffuse the smoke, resulting fumes from this traditional method of cooking are overpowering and toxic, especially when it comes to respiratory health.

We present a great solution to this in India and now after lots of International testing by actual users in diff. countries we offer it Globally for benefits of millions of Housewives

**Nearly 3 billion people in the developing world  
cook food and heat their homes with  
traditional cookstoves or open fires.**

*Decades of research into household air pollution have shown conclusively that smoke from cookstoves or cooking over open fires increases the risk for a host of health problems from:*

- **Childhood Pneumonia**
- **Lung Cancer**
- **Emphysema**
- **Chronic obstructive pulmonary disease (COPD)**
- **Cataracts**
- **Low birth-weight babies.**



India is the worst affected by about 7,50,000 premature deaths p.a. of women & children caused by Indoor Air Pollution (IAP) alone!

SAME PROBLEMS PERSISTS IN ALL AFRICAN AND SOME So. AMERICAN NATIONS AS WELL.



**“Global campaign takes aim at health hazards of traditional  
cookstoves: Women, children bear brunt of burden!”  
– *The Nation’s Health***



*Every 15 seconds somewhere, one child or woman is  
condemned to die by cookstove smoke poisoning!*

**“2 million premature deaths occur every year due to smoke exposure from these methods.  
That’s more than double the deaths caused by malaria each year”!**

**The sad fact is that women and children are the most affected.**



Prabir Mallik/World Bank Research on Indoor Air Pollution in South Asia

# What is the Solution?

How exactly can we reduce killer levels of exposure to old cookstove smoke?





*The issue of the serious health hazards of nearly half of the population of the world does call for the same level of importance devoted to critical public health concerns, such as clean water and immunization against infectious diseases, because such smokes (which are shown here) create health hazards all the time, which we don't note, usually.*



That is how a few years ago, like-minded and like-purpose driven organizations came together to form the Organization called the **Global Alliance for Clean Cookstoves (GACC)**  
**The nodal Organization for tackling the problem:**



# Lives to be saved and women to be liberated in India and many such countries

Below are the top three priority areas identified by the Government of India in their most up to date Plan Document for the needs of poor people in rural areas on an urgent basis.

- i) **Poverty alleviation** - employment generation in rural areas through Rural Development Programme.
- ii) Agriculture and allied sectors with strong emphasis on horticulture including post harvesting management and processing.
- iii) Providing social services like education, health, water supply and nutrition.

**MICRO-GASIFIER STOVES:  
MEETING THE GOALS OF THE GLOBAL ALLIANCE  
FOR CLEAN COOKSTOVES**

**TLUD Gasifier Biomass Stove**

- **TLUD** stands for “Top Lit Up Draft”.
- This is different from most of the ordinary cook Stoves, which are Bottom Lit Up Draft.
- There is a lot of interest in TLUD technology around the world, because of the following advantages.



The TLUD design stove saves around up to 75 % fuel material, when compared to a traditional 3 stone fire wood stove.

- It is suited to burn a variety of waste materials as fuel, such as twigs, coconut shells, certain husks, dry grass, etc. Some of these fuels are also available free of cost in certain localities.
- Deforestation and tree felling can be avoided for fuel wood generation, since agro residues and other waste materials can be used as fuels.
- The entire process is carbon-neutral if the residual charcoal is also burned. In case this charcoal is taken out and used as a soil conditioner, the entire process becomes carbon-negative. i.e. practically, the carbon is removed from the atmosphere and deposited in the soil.
- Hence, the TLUD technology is extremely environment-friendly.

# Efficiencies of Biomass Stoves

- Thermal transfer efficiency
- In general 20% to 40% is good, but Biomass Pellet stoves with forced air circulation, efficiency should be reaching up to 40% for ensuring favorable cost: benefit ratio.
- Much depends on the stove structure, not on the combustion technology.
- Combustion efficiency should be achieved keeping in view that this not a critical factor or the focal issue and is achievable, without much problem.
- For most stoves this is high at 95% and above.

# Emissions of TLUD Stoves

- Micro-gasifier stoves have the lowest emissions of any solid-fuel cookstoves.
- There is ample data to prove the above claim conclusively.
- Further testing is for refinements and is also verification of what is already known in quantitative terms.

## **Abundant Renewable Dry Biomass (but people only use a highly selective small fraction for energy).**

- Wood is the main biomass fuel. Collecting stick-wood can lead to deforestation. If wood is plentiful, wood chips are an excellent fuel for the gasifier stoves we will discuss.
- Tree-wastes sawdust (pellets), trimmings, twigs, seedpods, leaves, coconut shells/husks/fronds, etc.,
- Agro-wastes stems, hulls, husks, roots, cobs, by - products, dung, etc., some into biomass briquettes,
- Urban wastes discarded combustibles including paper/cardboard, some D&C, and dried sewage, bamboo, dried aquatic invaders, reeds from wetlands, etc.



# Product Life of TLUD Stoves

- Different metals for different components. Thin-wall stainless steel is used in fuel cylinder.
- Expect most parts to last more than 2 years, and expendable parts are easily replaced.
- Appropriate decentralized mass production into almost every country.
- Flat-pack for savings on distribution.

**GLOBAL ENERGY COLLABORATIONS**

**Presents**

**BIO-GLO HEALTH BLESSING STOVES**

**EFFICIENT DOMESTIC MICRO-GASIFIER**

**BIOMASS PELLET & NATURAL BIOMASS COOKSTOVES**

**A Unique Biomass Stoves**

**Which becomes a Blessing and**

**Boon for Housewife, it is a**

**Smokeless Biomass Stove**

**[Simple Green energy way for a Housewife in Kitchen]**

# Two Types of Life Saving & Home Blessing Biomass Stoves from Our Company

In order to eliminate the dangerous dense particulate killer smoke, and save lives of women and children in the rural poor these Stoves have been developed in 2 types:

1. **“Bio-Glo - HEALTH BLESSING STOVE”** :– with natural draft. This stove can gasify any type of wood chips, sticks and other solid biomass. **(No Battery need in this model)**
2. **“Bio-Glo - HOME BLESSING STOVE”** :– with battery, fan and forced draft air circulation and works on our own Brand “Easy-Cook Pellets”. This is highly suitable for all economically weaker sections of the society.

**“Bio Glo HEALTH BLESSING STOVE”- Giving clean flame with good heat delivery from any type of wood chips, short sticks etc.**





# **“Bio-Glo HEALTH BLESSING STOVE” can be used very easily in every day life**



You just need some, wood chips, sticks, forest and Agro residues can burn well in this TLUD stove,

# **“Grihani- Arogya” Stove (Meaning: Housewife’s Health Stove)**



# A Perfect Solution for High –cost LPG Problem for the economically weaker sections

- LPG is becoming prohibitively costlier each and every day. In some areas, the supply availability in itself is uncertain.
- We offer a perfect alternative to LPG for the economically weaker sections of the society!

This is called the **CGB “HOME BLESSING STOVE”**

*Which saves 60% of LPG cost.*



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## DOMESTIC: “HOME BLESSING STOVE”



The above pictured stove runs on batteries. However for LOW COST DOMESTIC USEAGE NON BATTERY STOVES ARE SUGGESTED .



# **Domestic Model Bio-Glo Blessing Stoves**

**This stove is for regular domestic kitchen use.**

**It is efficient & economical and saves time & money when compared to the LPG stove. It is light and compact, and aesthetically designed to be placed in any kitchen.**

## **Description of the Domestic “Housewife’s Lucky Fate” stove working**

- **It uses clean, hygienic & convenient “Easy – Cook” pellets (our own brand) with reliable & guaranteed supply from our company.**
- **It gives clean, bright & smokeless flame with excellent heat out put for your cooking needs.**
- **The flame level can be regulated to “Low” “Medium” & “High”, similar to the LPG stove.**
- **Food cooked on this natural Cook-Green Bio Stove tastes better!**
- **Easy to clean and restart with the newly designed ash removal system.**

**High calorific value Biomass Pellets of smaller cylindrical diameter should be used in these Bio-Stoves  
Bio-Pellets are not available at many locations easily**



# Benefits to Users:

- **1. Virtually maintenance free!**
- **2. Guaranteed Pellet supply on time!**
- **3. Technical support assured!**
- **4. One year Stove Warranty!**
- **5. Three months Replaceable Battery warranty!**

# CHANGE FOR A BETTER FUTURE!





**With the efficient & economic CGB Stove you can cook, fry, make curries, boil – do any thing you want!**







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**Saving lives of women & children; & our precious  
Planet from the ravages of Global Warming!**

Product development Credits to our Team member : Dr. V. J. Victor  
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