



**WELCOME**



**Our mother earth  
is ready to raise  
her Iron-hand,  
because she wants  
to save and secure  
her self.**

By: Gandhi Gopalakrishnan

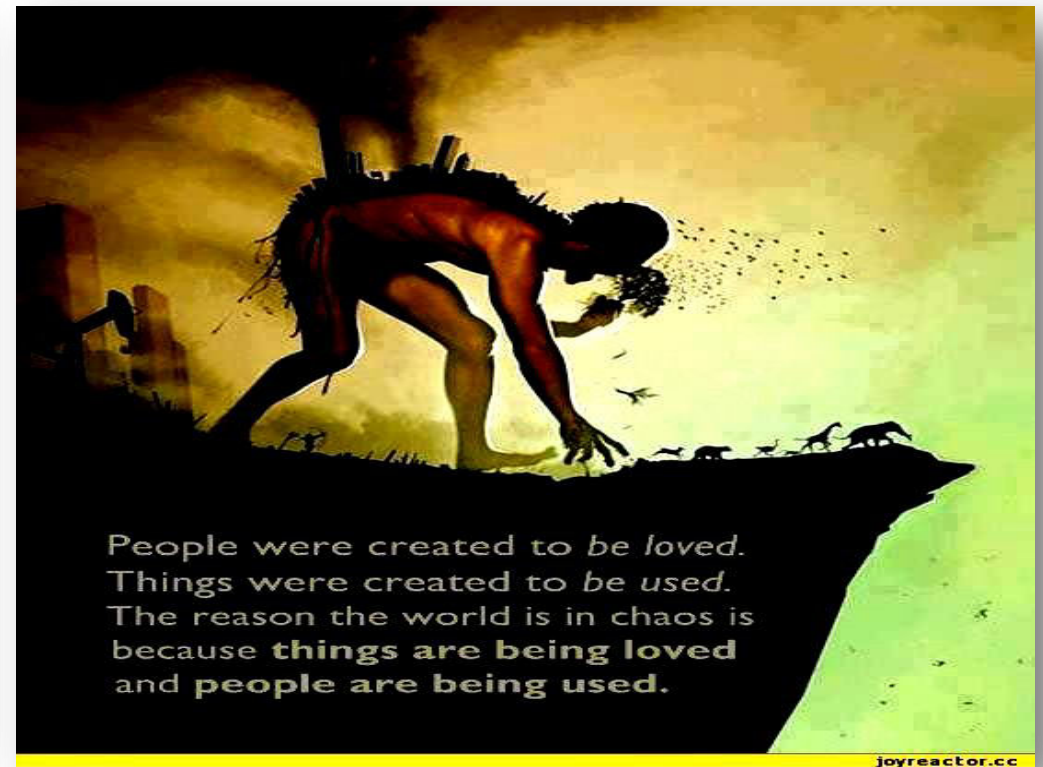


## Introduction:

- The Cuddalore District of Tamilnadu State in India. Parangipettai Bock is located on the north bank of the mouth of the Vellar river at a distance of 30 km from Cuddalore. Due to its strategic location on the Coromandel Coastal area, and old navigation area .
- The Climate change and global warming affects the people of this region by way of sea water intrusion, death of cattle, people migrated. The total ecosystem is at its stake, hence their life miserable.
- 
- The community people are looking forward to help them to come out of the grievous situation.



In today world Dinosaurs were disappeared because which was destroyed the eco system. Now the same has done by human, before we go to destroy, we must change our habits as well as possible.

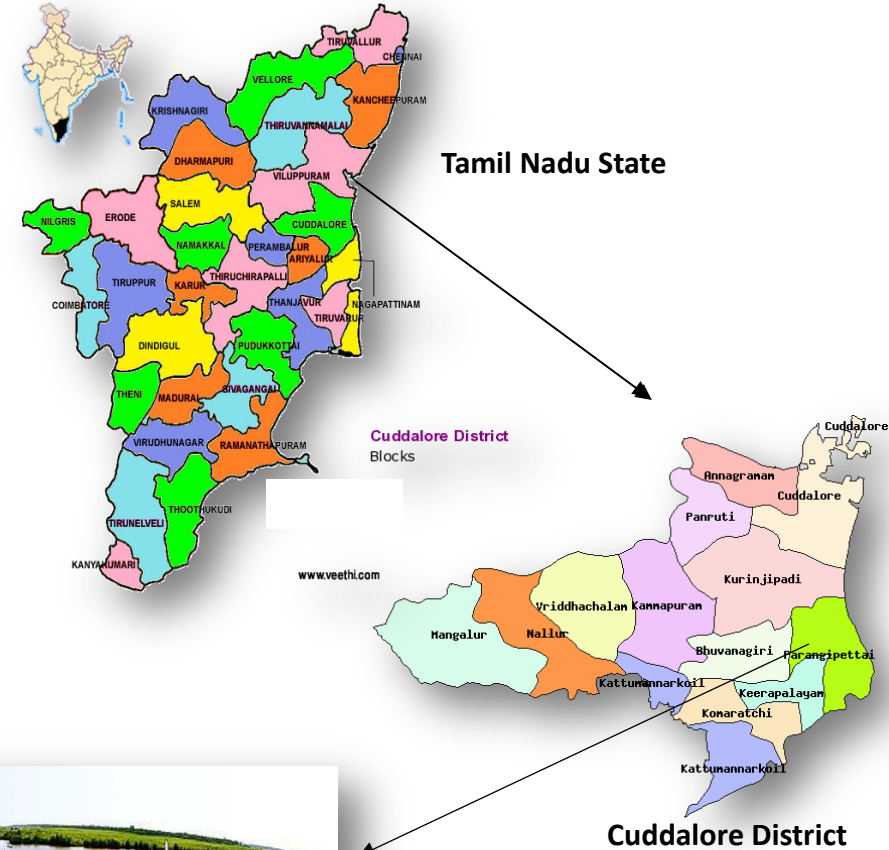






# Location:

- **Location : District-  
Cuddalore/ Block –  
Parangipettai.**
- **Population : above 20,000.**
- **No of Households: 5800**
- **Occupation : Agriculture**





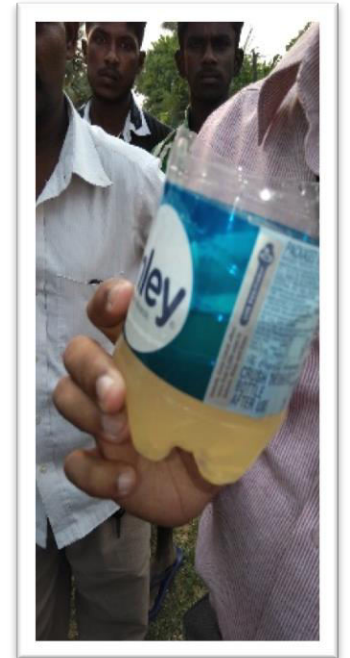
## Water related issues practically:





# Water related issues scientifically :

- Drinking water hand pump has high Iron content (turns reddish yellow within an hour) & TDS making it unpotable
- Cropping season has reduced to 5/year.
- Clay soil → ground water recharge potential is less
- Open defecation leads to eutrophication in the main canal
- The people of this region by way of floods, sea water intrusion, death of cattle, people migration are common in the areal.







# Present Water Sources in this area

## Water Sources :

**Ground water & river water**

- **Ground water available @10 feet depth water turns saline- TDS > 800 ppm.**
- **River available near but salty-TDS > 5000 ppm**

## Drinking water Sources :

- **Small tanker service for supplying drinking water cans → expensive and caters to < 10% of population.,**
- **At present the target people buy a 20 liter can for Rs. 35 per day.**
- **The community families spend this amount out of their meager earnings. It is a big burden and reduces their purchasing capacity of food items.**





# Immediate Intervention

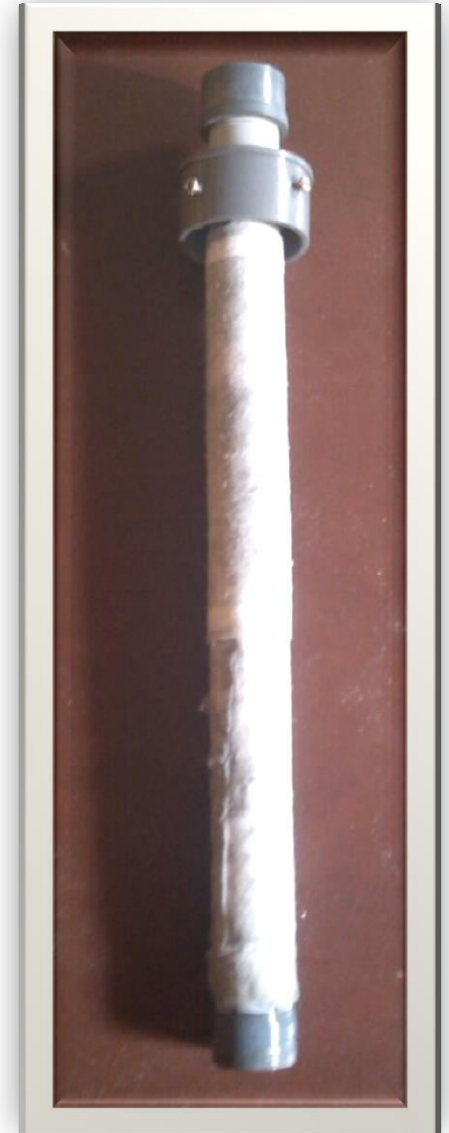
## Low Cost Water Filter& Purifier

### **INNOVATED BY-NEEADSNGO**



# Innovation -1 low cost Drinking Water Purifier

- Drinking water purification is the immediate intervention required
- NEEADS designed Small Compact Water Purifiers  
*(patent pending)*
- Solution @ Household level
- Purify 20 litres of water in 2 hours
- Gravity flow based system
- Non electric, no chemicals , easy to maintain & low cost
- Cost: RS:500/- Unit.

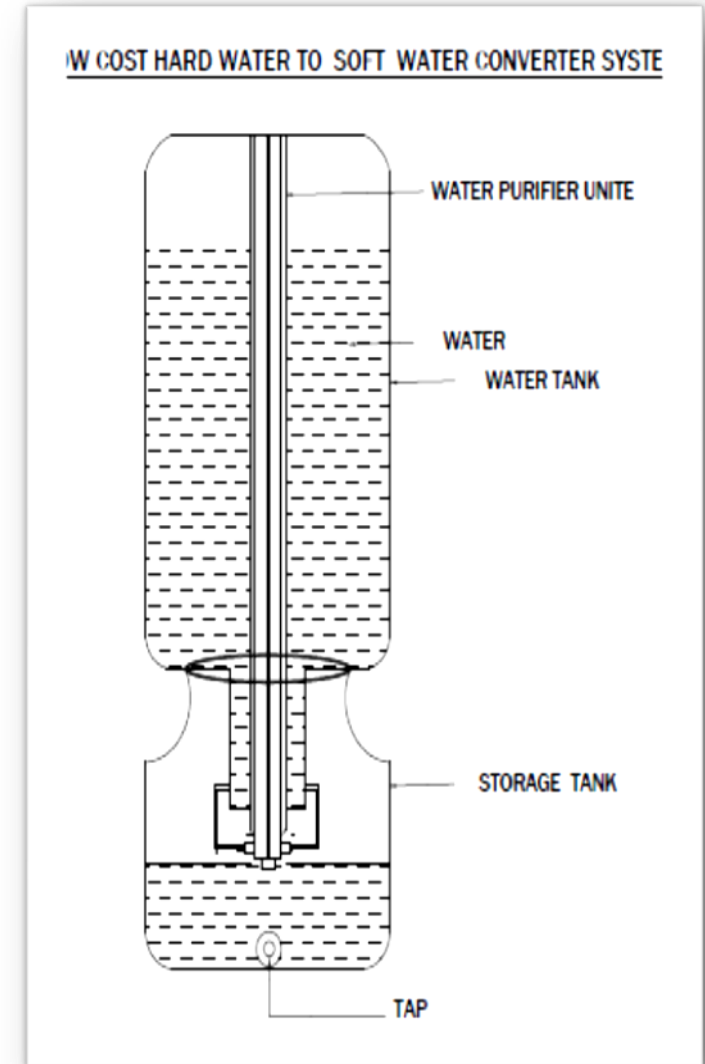




# Innovation - 1 System Process

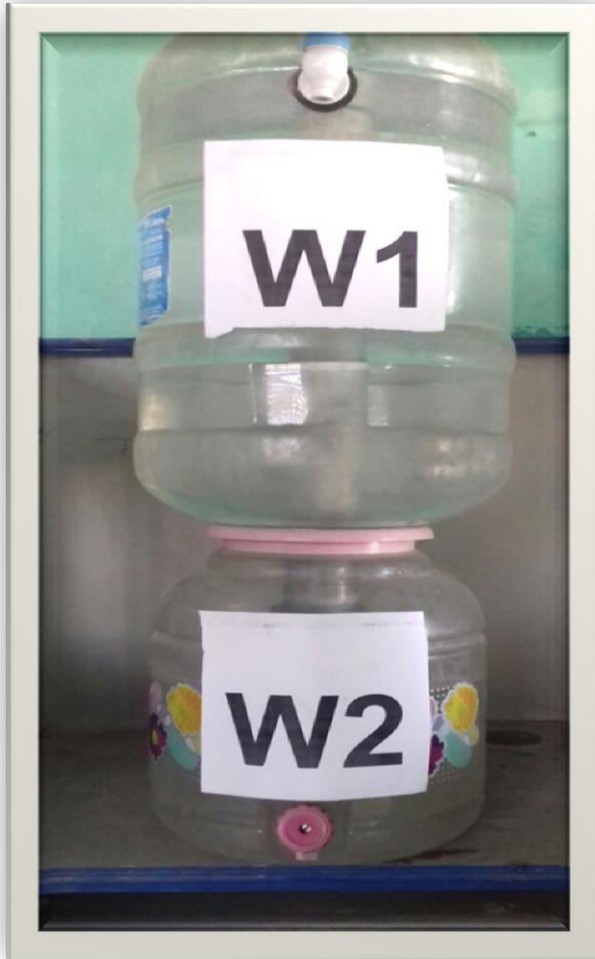
## 3 concentric filter media:

- **Cotton Mesh Filter** : Removes water the zooplankton and phytoplankton and other micro organisms
- **Sand Filter** : Separates fine particles
- **Activated Carbon** : reduction of toxic organic compounds as well as objectionable taste and odour compounds
- **Herbals & Alum** at the base to reduce the hardness of water.





# Results:



Water Purification System Set up



W1- Before Purification  
TDS : 841 ppm



W2- After Purification  
TDS : 124 ppm

Lab Test Reports is Enclosed





# Lab Test Results:

## TEST REPORT

Page : 1 of 1

Name of the Client : M/s. Gopala Krishna.,  
Address of the Client : #221/66-B,Segalunecrodai Street,Kancipuram,  
631502-Chennai,TN,India.

Report No. : HECS/PW/W/002/291116  
Report Date : 03/12/2016

Sample Description : WATER-PRO  
Sample Mark : W2-Needs NGO-1096  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 29/11/2016 -29/11/2016  
Analysis Commenced On : 29/11/2016

Completed On : 03/12/2016

S.No.	Parameters	Units	Results	Test Method
1	pH (at 25 °C)	-	8.47	IS 3025 (Part - 1):1983
2	Colour	Hazen Unit	BDL(DL1)	IS 3025(Part - 4):1983
3	Turbidity	NTU	BDL(DL0.1)	IS 3025(Part - 10):1984
4	Odour	-	Agreeable	IS 3025 (Part - 5):1983
5	Taste	-	Agreeable	IS 3025 (Part - 8):1984
6	Total Hardness as CaCO3	mg/l	390.0	IS 3025 (Part - 21):1983
7	Chloride as Cl	mg/l	272.18	IS 3025 (Part - 32):1988
8	Total Dissolved Solids	mg/l	1101.00 (Not Complies) (Not Complies)	IS 3025(Part -16):1984
9	Iron as Fe	mg/l	BDL(DL0.02)	IS 3025 (Part - 53):2003

Note:-BDL - Below Detection Limit, D.L.- Detection Limit, NTU-Nephelometric Turbidity Unit, mg/l - Milligrams per liter.

Remarks: Raw water-1 as above parameters partially meets Drinking Water IS: 10500:2012 Standards;

\*\*\*End of Report\*\*\*

Authorized Signatory

## TEST REPORT

Page : 1 of 1

Name of the Client : M/s. Gopala Krishna.,  
Address of the Client : #221/66-B,Segalunecrodai Street,Kancipuram,  
631502-Chennai,TN,India.

Report No. : HECS/M/PW/002/291116  
Report Date : 03/12/2016

Sample Description : Micro-PW  
Sample Mark : W2-Needs NGO-1096  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 29/11/2016 -29/11/2016  
Analysis Commenced On : 29/11/2016

Completed On : 03/12/2016

S.No.	Parameters	Units	Results	Test Method
1	Total Coliform Bacteria	per 100 ml	Absent	IS 1622 : 1981 (Reaffirmed 2009)

\*\*\*End of Report\*\*\*

Authorized Signatory



# Innovation -2 low cost domestic Water Purifier

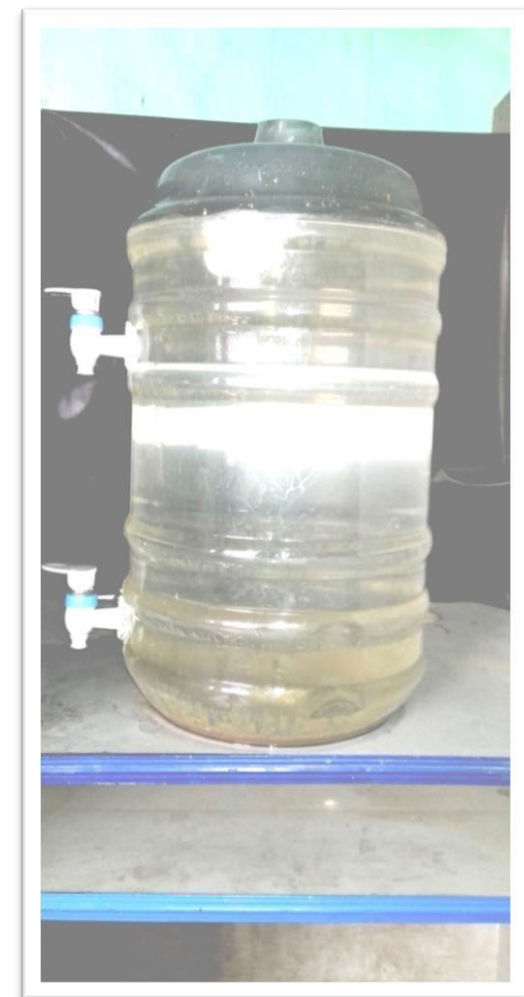
Before Purification



Purification kite



After Purification





# Innovation–2 System Process

- **concentric Gravity media:**
- Herbal based container :Its Separates the dust and rust particles and kill the germs. With support the gravity force.
- Solution @ Household level.
- Purify 20 litres of water in 3 hours
- Gravity flow based system
- Non electric, no chemicals , easy to maintain & low cost
- Cost: RS:50/- Unit.





## Action:



- **NEEADS discussed field level data with 8,272 family members. were distributed the 100 units at free of cost by NEEADS.**
- **Almost all the family members asking and required this kind of low cost units.**
- **NEEADS taking steps to provide all people with external support.**





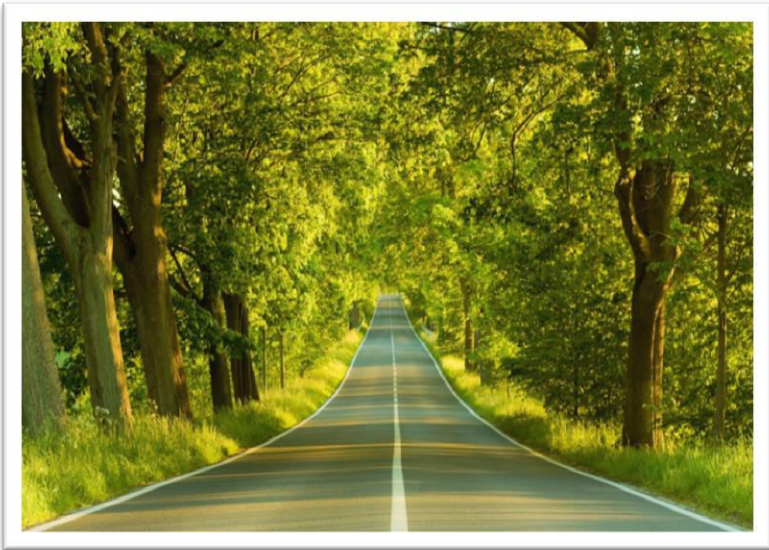
# Benefits:

- **Economy & Usability**
  - **Affordable Cost**
  - **Purifies water from any freshwater source**
  - **Requires no electricity, running water or water pressure**
  - **Makes hard water microbiologically safe to drink**
  - **Easy to assemble and maintain**
- **Health & Safety**
  - **No chemical additives to the water; non-leaching technology**
  - **Prevents contamination in input and storage containers**
- **Environment & Society**
  - **No wastage of electricity or water**
  - **Fewer filter media and easily available & replaceable**



# Invention & innovation

## For longtime sustainable growth



- Neeads trained the Farmers for Tamarind tree seeds planting in the road sides areas.
- This activates are create and support the sustainable balanced position in the wind and clouds.

**Output: Reduce the cyclone speed. Out comes: increase rainfall.**



# About NEEADSNGO

- **NEEADSNGO is a registered organization. Registration Number:3/2004 -dated 05/01/2004.It is a non-governmental, and social service organization.**
- **works with Farmers, Women and Youth on various developmental programmes in association with Government and donor partners.**
- **The organization currently working with 4 districts namely Cuddalore, Kanchipuram, Tiruvannamalai and Chennai for the past 12 years.**
- **Website: [www.needsngo.org](http://www.needsngo.org)**



**THANK YOU**

Natural Educational Environmental Agricultural Development Society  
(NEEADS NGO)

No.66-B, Sengaluneerodai Street,  
Kanchipuram-631502 Tamil Nadu State, India.

Phone: (O); +91 9443108339 ,+91 8220757925

Website: [www.needsngo.org](http://www.needsngo.org) Email : [needsngo.in@gmail.com](mailto:needsngo.in@gmail.com)