

# Rehabilitation Response to Chennai Floods 2015

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## Introduction

The heaviest rainfall in over a century, climate change and poor civil infrastructure planning have caused massive flooding in Chennai and across Tamil Nadu in early December 2015, driving thousands from their homes. As flood waters recede the 'need of the hour' is to ensure availability of basic amenities and check the spread of disease – especially for the poor.

This is a proposal to develop and fund rehabilitation kits for those worst affected by the floods. Importantly our aim is to create a highly targeted response to address the 'need of the hour' and to provide transparency to donors – ensuring that the aid reaches their intended recipients in full, without hindrances or delays.

## Current Situation

Some 100,000 people are out of their homes and living in 136 government-run relief camps in Chennai. Several parts of the city remain cut off due to poor connectivity. As rain waters subside garbage and sludge have collected on the streets and sewage has entered homes, damaging properties. The following photos were taken around various parts of Chennai on December 9-10, 2015.



## Rehabilitation Kits

We propose to develop two kits in consideration of the structured, phased effort required to get flood affected victims back on to their feet:

- **Phase 1 – Relief:** this kit is aimed at providing for immediate functional necessities whilst families find themselves in temporary shelters. The key theme here is health and hygiene management to ensure that families are protected from diseases such as diarrhoea. Furthermore the kit enables self-reliance – enabling families to cook and thereby ease pressure on relief workers who are likely to be stretched in their efforts. Phase 1 is expected to last two months.
- **Phase 2 – Rehabilitation:** this kit will enable families to ease back to their normal lives and routines, freeing themselves of the effects of the flood, with better prospects for health, hygiene and cost saving than before. This includes access to clean drinking water, clean cooking, and hygiene management within their homes. Phase 2 is expected to kick in within the next one or two months

	Kit contents	Relief aid required per kit
Phase 1 – Relief	<ul style="list-style-type: none"> <li>• Efficient kerosene stove</li> <li>• Utensils starter kit</li> <li>• Sodium Hypochlorite based solution for disinfecting flood water, garbage to reduce incidence of disease</li> <li>• Activated EM solution (general purpose disinfectant)</li> </ul>	INR1000*
Phase 2 – Rehabilitation	<ul style="list-style-type: none"> <li>• Water filter</li> <li>• Biomass clean cookstove + latent heat cooker which serves to preserve food (hot and cold)</li> <li>• Disinfectant</li> <li>• Activated EM</li> </ul>	INR3500* (to be finalised)

\* Prices are at cost i.e. no profit is made by any parties as a result



The content of each kit have a specific functional purpose and suited to the needs of the recipient families at the time:


Kerosene stove	<ul style="list-style-type: none"> <li>• Kerosene is one of the few fuels that will be effective in the aftermath of the flood. Biomass fuels such as wood, dung and coal will not burn efficiently due to dampness. Furthermore the poor do not have access to LPG cylinders</li> <li>• The Tamil Nadu government has allotted 3 litres of kerosene per household free of cost</li> <li>• The stove offered is a flagship product of the Servals company and was developed by the Late Mr. M. Thyagarajan – lab assistant to the Late Dr. Abdul Kalam.</li> <li>• The kero burner saves up to 30% on kerosene and is widely used across India</li> </ul>
Utensils starter kit	<p>Contents include:</p> <ul style="list-style-type: none"> <li>• 1x bucket</li> <li>• 1 x big karandi</li> <li>• 1 x small karandi</li> <li>• 1 x big plate</li> <li>• 1 x small plate</li> <li>• 1 x kadai (vanali)</li> <li>• 1 x vessel for rice</li> <li>• 1 x mug</li> <li>• 2 x tumbler</li> <li>• 1 x mat</li> </ul>
AQUA Disinfectant	<ul style="list-style-type: none"> <li>• Sodium Hypochlorite solution for disinfecting external premises including puddles of water, garbage and waste around the house</li> <li>• Disinfects water by removing the bacteria that cause water borne diseases</li> </ul>

	<p>such as diarrhoea cholera etc</p> <ul style="list-style-type: none"> <li>• Sodium Hypochlorite is used extensively by the army in many western countries to treat and clean flood water to reduce outbreak of diseases</li> </ul>
Activated EM	<ul style="list-style-type: none"> <li>• Microbial solution that is an effective cleaner for indoor surfaces, particularly surfaces that touch food and the human body</li> <li>• Is a natural product discovered in 1982 by Dr.Higa at the University of Ryukyus, Okinawa Japan</li> <li>• E.M. stands for Effective Microorganisms which comprises of a specific group of naturally occurring beneficial microorganisms with an amazing ability to revive, restore, and preserve</li> </ul>
Biomass clean cookstove	<ul style="list-style-type: none"> <li>• Surabi stove – based on the “Save 80” model which is one of the five most used cookstoves in the world</li> <li>• Highly efficient and therefore provides cost savings for the poor – an experienced person can save 80% of the firewood consumption of a traditional open fireplace (3-stone-fire).</li> <li>• The stove needs around 250g of dry firewood to bring 6 litres of water to the boil</li> </ul>
Latent heat cooker	<ul style="list-style-type: none"> <li>• 4 litre capacity – designed per latent heat principles to preserve both hot and cold temperatures</li> <li>• Functions as a “cooking finisher” by saving heat eliminating needing to burn fuel thereby saving cost</li> <li>• Function as a “mini fridge” without requiring electricity – an effective solution for storage of perishables for the poor reducing incidence of insects, rats etc</li> </ul>
Water filter	<ul style="list-style-type: none"> <li>• Terafil Water Filter – a low cost device to filter impure water into clean drinking water</li> <li>• Aimed at poorer households it enables filtration of water is rich in sediments, suspended particles, iron</li> </ul>

## Dissemination of Kits




Other than addressing essential needs of the flood victims through rehabilitation kits, the other explicit aim of this proposal is to ensure that reaches its target without hindrances brought about by government or other bureaucracy. This will be done by providing donors with transparency to view where their aid is going. To this end we will work with volunteer circles headed by three young dynamic individuals on the ground who are also good Samaritans at heart.

	<p><b>Clement Sudharson</b></p> <p>Clement’s area of reach is Mudichur, kilkatalai, Sholinganallur, Perumbakkam, Siruseri, and Perungulathur. He will tend to ~500 rehabilitation seeking families</p>
	<p><b>Prasanna Kesavan</b></p> <p>Prasanna with the help of his friends is working with Srilankan Refugee family camps near Puzhal and Gummidipoondi. He is intending to assist ~350 rehabilitation seeking families</p>

	<p><b>Wesly Thomas</b></p> <p>Wesly is an engineer working as a manager at Mercy Plates and Vessels, Chennai. He is associated with Love Foundation and has been involved in reaching out to more than 234 people in a day as part of relief efforts. He was also involved in doing rescue and has also distributed food packets and blankets. His area of operation is rural North Chennai. Wesley has a list of ~400 rehabilitation seeking families.</p>
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Clement, Prasanna and Wesley are all happy to provide regular updates such as photos and communications on their efforts to assist individuals, families and communities that they tend to with the aid provided. They are also willing and capable of undertaking the education and awareness creation that is required to ensure that the hygiene management around the disinfectant, AEM and latent heat cooker become a cultural change for the families going forward.

## Other volunteers

	<p><b>Sujatha Srinivasan</b></p> <p>Sujatha conceptualised the idea of the rehabilitation kits. She heads Servals Automation Pty Ltd – a Chennai based social enterprise engaged in the manufacture of socially relevant products that are clean, green, affordable and environmentally sustainable for cooking and lighting, aimed at “bottom-of-the-pyramid” consumers</p>
	<p><b>Ashiq Ahamed</b></p> <p>Ashiq is working closely with Sujatha in coordinating the project to produce and disseminate the rehabilitation kits. Based in Chennai Ashiq is an engineering professional working in development sector with interest in combustion science, appropriate technologies, energy saving interventions, skill development and economics.</p>
	<p><b>Saptarshi Ray</b></p> <p>Saptarshi is based in Sydney and has deep interest in clean energy projects aimed at alleviating energy poverty for those living below the poverty line in India and beyond. Through his work on clean cookstoves, working in association with Sujatha and Ashiq, became involved in relief work for the Chennai floods</p>