AGENDAS

A) Plastic Disposal- 70kg

- SHREDDING & EXPOSURE TO SUNLIGHT
- MIXING WITH BITUMEN FOR METALLING

B) ENVIRONMENTAL AWARENESS

- SEMINAR
- PAMPHLETS/POSTERS

LOVERS FOUNDATION

JUNE 2018

PILOT PROJECT

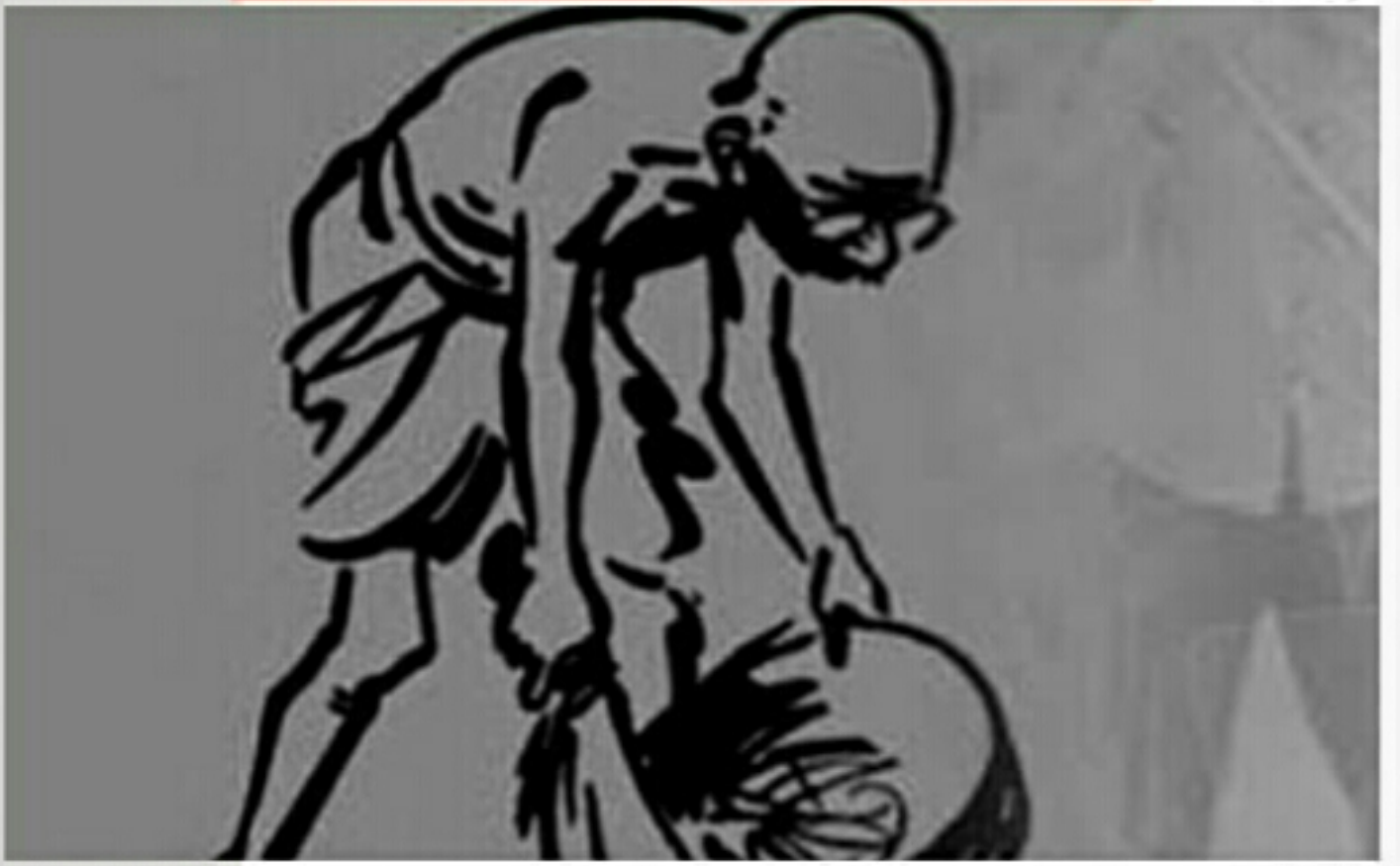
TIMELINE ~3 MONTHS

INVESTMENT ~15K

LOCATION - MAITA

Lovers Foundation

YUL LHAKMO



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VISION DOCUMENT

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Mission Statement :

To herald sustainable rural development & to conserve the delicate environment, in dearth of multi-pronged approaches to deal with the unsustainable dyanmic changes, the Society has taken up the mission of "Rural Sustainability" as its flagship Mission. The Mission shall subsume, Village Cleanliness (Yul Lhakmo), Plastic Disposals, Environmental Awareness & the likes.

Vision :

Ladakhification of System, Environment, Education & every other appendage, to herald a prosperous, outwardlooking & civilised Ladakh.

Agendas :

a) Environmental Awareness
b) Collection & Treatment of Plastic

Plastic Collection- What's average generated in Maita?

An Indian, on average generates ~ 11kg of plastic waste, yearly. With reference to this figure & considering the agronomic & alienated culture, a Maitian HH might be generating half of it, yearly. With ~50 HH's & an average period of 2 years, this amounts to around 70kg of plastic littered within the streets and boundaries, of the rustic vale.

METHODS FOR TREATMENT

A) Exposing to Sunlight

The waste can be collected & shredded in a pit, on an open area, with netted lid. The netted lid shall ensure resistance to blowers & effectuate exposure to sunlight. It may take around 5-6 years for losing half of the waste. Mere burying in pits, can't treat the waste, as bio-decomposers don't opt for breaking the long C-C chains, whereas exposure to sunlight (UV rays), weathers away the C-C bond, over a definite period of time.

B) Metalling the pits :

With a strecth of over 400 metres b/w Maita & Khichoor, about 1/20th are pits or mere DLC layer, lacking the PQC layer. That amounts to 20 metres of un-metalled road.

For better convenience, suppose, 'k' be the length of road to be metalled, then by simple Mathematics,

$0.1 \times 3.75 \times k$ = Available volume of PQC (that will be prepared as per waste plastic composition)

where, 0.1 - height of PQC layer, 3.75- breadth of single lane road, etc

Thumbrule:

For every 1 kg of crushed stone, we will be using 45 g of Bitumen or the like & 5g of waste plastic.

Mathematics :

1) Average Density of Plastic, 1086; volume contributed = 0.06 cubic metre
2) lly, V contributed by crushed stone= 8.73
3) And, V contributed by Bitumen= 0.61

Total volume = 9.40 cubic metre

Fractional Volume (1+3) = 0.67

Equating, with the PQC eqn, k = ~25m

In nutshell, we will be collecting 70kg of plastic, mixing it with 630kg of Bitumen & 14K kg of crushed stone, to metal 20m of un-metalled road.

Our target shall be less than 25m, thus leveraging enough flexibility.

Steps Involved :

1) Awareness followed by collection of waste plastic
2) Rinsing, drying & shredding
3) Heating at around 160°C
4) Separate Bitumen heated at around 170°C
5) Mixing the mixture with controlled temperature
6) Flling the Pits

Pre-requisites :

1) Two Heating Drums
2) Fuel wood
3) Bitumen

Note: Crushed stone will not be required, since only the asphalt layer has worn away.

Material Expenditure :

1) Cost of 630 kg Bitumen – 12k INR (or even less, if Admn ....)

Safeguards :

1) Only metalling pits can't be sustainable for a longer period of time.
2) Method 'A' shall be prefered & Administration to be pressurised to bring about requisite road infrastructure- lifeline of modern economy.
3) Elongated Timeline of ~3 months.

DRAFT PROPOSAL

The Vision Document- Yol Lisbon

The Document is onlu a Draft Proposal. The final vision Document will be publisbed once the Extraordinary General Meeting pro rogues. Further, the Vision Document shall subsume some other agendas as well