

# Desertification of Earth and Strategies for reversing it

**“Deserts are Man Made”**



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# Agenda

- Past created Deserts
  - Desertification is a process parallel to the extinction of life
- The present is even worse
- Vegetation and Micro Fauna
- **MAN MADE Extinction**
- At a Tangible Scale
- There is a brighter side for mankind
- Reversal of Desertification
- Basic principles of reversing desertification
- The Killing Tillers
- **“No Dew Drops, but just dues in the banks and drops in the eyes”**

# Man Made Deserts



**A Picture of Sahara Desert**

# The Sahara Desert



- From 2 lakh years BC to 1 BC
- Cradle Of Human civilization
- Nile and extinct rivers

# Great Crossover to the Mainland



- Mesopotamian civilization
- Tigris and Euphrates river delta
- Next desert after the crossing over of humans



# Indus Valley Civilization



- Civilization's spread to the east so did the deserts

# Yellow River valley



- The tip of the eastern spread
- and so the spread of desertification...

# Early States of the Old world



- Maps of civilizations and the deserts linked to civilizations
- **It is extremely unnatural to have deserts on the banks of such vast rivers. This is only because wherever Man lived in large numbers he has turned them into deserts!**



# The present is even worse

- The last 500 years
  - forest cover on earth reduced by 80 percent
- Last four decades alone,
  - **human population has doubled**
  - **number of bugs, beetles, worms and butterflies (micro fauna) has declined by 45%**, says Rodolfo Dirzo, a professor of biology at Stanford University.

**“It is as if we simply have a license to kill”**

# Vegetation and Micro Fauna

- Vegetation and micro fauna is the base for the rest of life on this earth.
  - If there are no micro fauna, the birds will starve to death, and
  - without vegetation the mega fauna that feed on it and their predators shall perish.
- **Deforestation** and **defaunation** are the first signs of desertification
- Desertification is a process parallel to the extinction of life

# MAN MADE Extinction

- Present day population is at least a hundred times the population of the period of the ancient civilizations of Egypt, Mesopotamia,
- Compared to earlier and today's methods of agriculture
  - Far more destructive for the natural flora and fauna
  - Their destruction is happening at a much faster scale.

# At a Tangible Scale

Parameter	Actual	To Scale
Life on this earth	3.6 billion years ago	1 year ago
Human Origin	2,00,000 years	30 minutes ago
80% deforestation	500 years	4.35 seconds
45% Loss of Micro Fauna	40 years	0.35 seconds



**“It is as if Man is a huge meteor that has hit this earth”**





# Repeated Extinctions

- **The Cretaceous-Tertiary**
- **Triassic-Jurassic**
- **The Permian**
- **The Late Devonian**
- **The Ordovician-Silurian**
  
- The next will be easy to pronounce and remember –  
“It is man made”
  - and we will not know if this kind of life can come back

# There is a bright side...

- Man, with his enormous intelligence, has accumulated vast knowledge and survival skills
- Man has developed advanced technologies that can be put to work both ways that is to help life survive or make it perish

*“I have been involved in process of forestation and increase in Fauna as a profession for last 20 years and this presentation/paper is outcome of that effort”*

# Reversal of Desertification

1. Increase in the ratio of fresh water to sea water, leading to more rains and bigger rivers
2. Increase in flora through forestation
3. Enhancement of fresh water resources and rising of the groundwater level
4. Arresting of the process of depletion and even extinction of various species of fauna
5. Arresting the increase of certain species like rodents and the diseases carrying ectoparasites



# Basic principles of reversing desertification

**“Out of EQUVALITY, LIBERTY AND FRATERNITY, the LIBERTY is over exploited.  
The plough and the tilling tractor kill more than bullets and bombs.”**

1. Man is not the owner of this earth and has no right to destroy vegetation and micro fauna
2. Land owner should not have the freedom to do anything that he wishes with the land
3. The land that is under agriculture should be reduced at least by a half
4. Irrigation and modern technology should be used for forest growth also
5. Farms should have substantial permanent vegetation and the practice of “all in all out” should stop
- 6. The plough and tilling tractor kills more than bullets and bombs**
7. Radical changes are needed in agricultural practices to reduce the area and increase the yield per unit area

# Killing Tillers



# Killing Tillers - 1

- The plough and the tillers kill more than bullets and bombs
- At the end of summer the farmer keeps his plough and oxen ready and at the first rain he starts tilling his land. The bigger farmers do the same with their mighty tractors.
- The tilling is done
  - To uproot all the vegetation in the farm – generally called as weeds and hereinafter called as flora
  - To kill all the bugs, bees, beetles and butterflies– generally called pests and hereinafter called 4B, along with their eggs and larvae
  - To loosen the soil. In two weeks after the first rains, all the farmlands are tilled, except the bunds over which the sheep and the cattle graze

# Killing Tillers - 2

- When all the farm lands are freshly tilled,
  - freshness all around
  - millions of dead flora and the 4B and their eggs and larvae are getting roasted under the sun to become manure for the crops
  - Millions of deaths have taken place for each poor farmer's need
  - billions of deaths have taken place for every rich farmer's greed (as in mechanized maize farms extending over kms).
  - This massive killing is the effect of tilling
- **In addition to mother Earth, every follower of Mahaveer Jain and every naturalist, even the most selfish man, would cry over this mass killing, when considering the points below.**



# Killing Tillers - 3



# Killing Tillers - 4

- After the tilling, when it rains, fresh water precipitation just goes underground.
- Most of the time, Tilled land is barren. Until something grows
  - the water continues to go underground.
  - This flow into the ground does not simply stay there but by gravity sinks deeper and reaches the sea.
- As long as the crop stands,
  - absorption by the plants and transpiration
  - sending some of the water to the atmosphere in the day to precipitate as dew in the night.
- After the crops are harvested
  - the land becomes barren and any rainfall or dew just sinks into the ground and reaches the sea.

# Killing Tillers - 5

- If land was not tilled at all
  - flora would immediately absorb the rainfall and keep on sending it to the atmosphere, which would return as dew and rainfall.
  - This Recycling of fresh water above the surface makes it cumulative
  - results in growth of big trees, which store even more water and keep returning it, thereby increasing the surface water.
- Sans this tilling
  - the 4B would flourish and be food for the birds
  - their eggs would be food for reptiles which also flourish
  - The flora that flourishes will be food for the mega fauna. This is the natural cycle of life on this earth
  - the ground will be firm and less water will go underground due increased fresh water in the air as well as in the plants and trees
  - the rainwater would flow on the surface resulting in streams and rivers.

# Killing Tillers - 6

- Should the tilling continue
  - the enhanced flow of fresh water into the ground and into the sea
  - Keeps reducing fresh water on the surface and therefore, the rainfall and the dew.
  - Finally, the water that evaporates from the sea will be the only source of fresh water
- The Selfish man who is not bothered with the flora and fauna will still cry
  - a situation is created where only lands that are blessed with storms coming from the sea will get rainfall
  - other areas the rainfall reduces to a trickle.

# In my own village in Kolar...

- Forty years ago, there were open wells with fresh water from a depth of 20 feet below the surface of the ground



- After constant tilling of the earth extended areas over the last 4 decades, there is no water in even the 2000 feet deep bore wells.

- Then there were dew drops in the mornings on every leaf of the beetle leaf gardens
- Now neither are there gardens nor are there dew drops.
- **“There are only dues in the banks and drops in the eyes”**





**Thank you**